CITY OF ELK GROVE
COMMUNITY DEVELOPMENT DEPARTMENT

Milestone II GPA, Rezone, and Map Project (PLNG24-008)

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

June 2025

RANEY PLANNING & MANAGEMENT, INC.
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INITIAL STUDY
JUNE 2025

A. BACKGROUND

1. Project Title: Milestone II Subdivision Project

2. Lead Agency Name and Address: City of Elk Grove
Current Planning Division
8401 Laguna Palms Way
Elk Grove, CA 95758

3. Contact Person and Phone Number: Sarah Kirchgessner
Senior Planner
(916) 478-2245

4. Project Location: Wayne Heintz Street and Wyland Drive
Elk Grove, CA 95758
APN 134-0110-177

5. Project Applicant's Name and Address: Ryan Hatheway
Taylor Morrison of California, LLC
81 Blue Ravine Road, Suite 220
Folsom, CA 95630
(916) 932-0970

6. Existing General Plan/Community Plan Designation: Public Services (PS)

7. Proposed General Plan/Community Plan Designation: Low Density Residential (LDR)

8. Existing Zoning Designation: Low Density Residential District 5 (RD-5)

9. Proposed Zoning Designation: Low Density Residential District 6 (RD-6)

10. Required Approvals from Other Public Agencies: None

11. Surrounding Land Uses and Setting:

The Milestone II GPA, Rezone, and Map Project (Project) site ("site") is located northwest of the intersection of Wayne Heintz Street and Wyland Drive in the City of Elk Grove, California. The approximately 10.38-acre site, identified by Assessor's Parcel Number (APN) 134-0110-177, is currently undeveloped and has been previously graded. Surrounding existing land uses include single-family residences to the north, east, and west, and the planned Unity Park, single-family residences, and the Saini Walking and Bicycle Trail to the south, across Wayne Heintz Street. The City of Elk Grove General Plan designates the site as Public Services (PS). The site is in the East Elk Grove sub-area of

the Eastern Elk Grove Community Plan (EEGCP) area. The site is zoned Low Density Residential/RD-5 (5 dwelling units per acre maximum) within the East Elk Grove overlay district.

12. Project Description Summary:

    The Project includes development of a residential subdivision consisting of 56 single-family lots with an average lot size of approximately 5,225 square feet (sf), as well as a 0.77-acre low impact development (LID) stormwater facility area located in the southwest corner of the site. Site access would be provided by two new roadway intersections off of Wyland Drive, which would connect to a new internal roadway (A Street). Frontage improvements along Wyland Drive and Wayne Heintz Street associated with the Project include development of sidewalks, curbs, gutters, and a six-foot planter between the sidewalk and curb and gutter on Wyland Drive. The Project would require approval of a General Plan Amendment/Community Plan Amendment (GPA/EEGCPA), Rezone, Small Lot Tentative Subdivision Map with Abandonment of right-of-way, Subdivision Design Review, and Determination of Consistency for the Abandonment of right-of-way that is no longer needed .

13. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1:

    In compliance with Assembly Bill (AB) 52 (Public Resources Code [PRC] Section 21080.3.1) and Senate Bill (SB) 18, on June 3, 2024, the City provided formal notification letters to the following tribes that had requested notification: Buena Vista Rancheria of Me-Wuk Indians; Calaveras Band of Mi-Wuk Indians; California Valley Miwok Tribe; Chicken Ranch Rancheria of Me-Wuk Indians; Ione Band of Miwok Indians; Jackson Rancheria Band of Miwuk Indians; Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Pakan'yani Maidu of Strawberry Valley Rancheria; Shingle Springs Band of Miwok Indians; Tsi-Akim Maidu of the Taylorsville Rancheria; United Auburn Indian Community of the Auburn Rancheria; and Wilton Rancheria. Requests for consultation were not received within the required response period.

B. SOURCES

All of the technical reports and modeling results used for the Project analysis are available upon request at the City of Elk Grove Current Planning Department, 8401 Laguna Palms Way, Elk Grove, California, Monday through Friday between 8:00 AM and 5:00 PM. The following documents are referenced information sources used for the purposes of this IS/MND:

1. California Building Standards Commission. *2022 California Green Building Standards Code*. 2023.
2. California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed February 2025.
3. California Department of Forestry and Fire Protection. *Sacramento County, Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE*. March 13, 2023.
4. California Department of Transportation. *List of eligible and officially designated State Scenic Highways*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed February 2025.
5. California Regional Water Quality Control Board, Central Valley Region. Order No. R5-2021-0019 NPDES No. CA0077682 . April 2021.

6. City of Elk Grove. About the Elk Grove Police Department. Available at: https://elkgrove.gov/departments-and-divisions/police-department. Accessed March 2025.
7. City of Elk Grove. *Bicycle, Pedestrian, and Trails Master Plan.* May 2021.
8. City of Elk Grove. *General Plan*. February 2019.
9. City of Elk Grove. *General Plan Update Draft Environmental Impact Report*. February 2019.
10. City of Elk Grove. *Mello-Roos CFDs.* Available at: https://elkgrove.gov/special-tax-districts/mello-roos-community-facilities-districts-cfds. Accessed May 2025.
11. City of Elk Grove. *Swainson's Hawk Program.* Available at: https://www.elkgrovecity.org/resources-and-policies/swainsons-hawk-program#:~:text=In%202003%2C%20the%20City%20established,to%20result%20in%20a%20%22potential. Accessed February 2025.
12. Cosumnes Fire Department. 2024 Annual Report. Available at: https://cosumnescsd.gov/DocumentCenter/View/27704/2024-Calendar-Year-Cosumnes-Fire-Department-Summary-Infographic?bidId=. Accessed March 2025.
13. Department of Conservation. California Geological Survey Earthquake Zones of Required In*vestigation.* Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/. Accessed February. 2025.
14. Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES. Accessed February 2025.
15. ECORP Consulting, Inc. *Milestone II Residential Project – Greenhouse Gas Emissions Memorandum.* November 2024.
16. Elk Grove Water District. About Elk Grove Water District. Available at: https://www.egwd.org/about/#:~:text=The%20EGWD%20provides%20water%20through,publicly%20elected%2C%20Board%20of%20Directors.&text=You%20can%20read%20the%20article,the%20public%20and%20other%20stakeholders.%22. Accessed March 2025.
17. Federal Emergency Management Agency. *Flood Insurance Rate Map 06067C0338H*. Available at: https://msc.fema.gov/portal/search?AddressQuery=9119%20Willowberry%20Way%2C%20Elk%20Grove%2C%20CA%2095758#searchresultsanchor. Accessed January 2025.
18. Fehr & Peers. *Milestone II Rezone – Transportation Impact analysis and VMT Analysis*. March 26, 2025.
19. Geocon Consultants, Inc. *Geotechnical Investigation Milestone II Residential Subdivision Elk Grove, California.* May, 2024.
20. MacKay & Somps. *Storm Water Quality Evaluation for Milestone II Small Lot Vesting Tentative Map*. March 6, 2024.
21. Madrone Ecological Consulting. *Biological Resources Assessment Milestone II Elk Grove, Sacramento County, California. February* 2025.
22. Madrone Ecological Consulting. Special-Status Plant survey Report, Milestone II Elk Grove, Sacramento County, California. May 2025.
23. Madrone Ecological Consulting. Aquatic Resources Delineation Report, Milestone II Elk Grove, Sacramento County, California. May 2025.
24. Native American Heritage Commission. *Milestone II GPA/Rezone, and Map Project, Sacramento County.* April 15, 2024.
25. North Central Information Center. *Records Search Results for Milestone II Subdivision Project*. October 25, 2024.
26. Sacramento County. *Sacramento County Multi-jurisdictional Local Hazard Mitigation Plan Update*. September 2021.

27. Sacramento Metropolitan Air Quality Management District. *Climate Action Planning in the Sacramento Metropolitan Air Quality Management District*. November 2017.
28. Sacramento Metropolitan Air Quality Management District. *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. October 2020.
29. United States Census Bureau. *QuickFacts: Elk Grove city, California*. Available at: https://www.census.gov/quickfacts/elkgrovecitycalifornia. Accessed January 2025.
30. Wallace Kuhl & Associates. *Phase I Environmental Site Assessment: Milestone II Property Wyland Drive Elk Grove, California Project No. 4640.2200088.0000*. July 8, 2022.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is "Less-Than-Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	☐ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	☐ **Energy**
✖ **Geology and Soils**	✖ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**
✖ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
✖ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	✖ **Transportation**	✖ **Tribal Cultural Resources**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

D. DETERMINATION

On the basis of this initial study:

☐ 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 applicant. 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 Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" 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 on 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 Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the Project, nothing further is required.

Signature	Date
Sarah Kirchgessner, Senior Planner	City of Elk Grove
Printed Name	For

E. BACKGROUND AND INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies and analyzes the potential environmental impacts of the Project. The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the Project, mitigation measures are prescribed. The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the Project, as required by CEQA. The mitigation measures would be incorporated into the Project through project conditions of approval. The City would adopt findings and a Mitigation Monitoring/Reporting Program for the Project in conjunction with approval of the Project.

In February 2019, the City of Elk Grove adopted a new General Plan Update and certified an associated Environmental Impact Report (EIR) for the updated General Plan (SCH No. 2017062058). In December 2023 the City of Elk Grove adopted a General Plan Amendment as reflected in the Complete General Plan posted on the City's website and certified a Final Subsequent EIR (SCH No. 2022020463) for the General Plan Amendment. The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations [CCR], Sections 15000 *et seq*.). The General Plan EIR analyzed full implementation of the General Plan and identified measures to mitigate the significant adverse impacts associated with the General Plan. Consistent with Section 15150 of the CEQA Guidelines, applicable portions of the General Plan and General Plan EIR are incorporated by reference as part of this IS/MND. The referenced General Plan and General Plan EIR are available to the public for inspection at Elk Grove City Hall (8401 Laguna Palms Way) and online at the following web address:

https://elkgrove.gov/general-plan/general-plan-documents#eir

F. PROJECT DESCRIPTION

The following provides a description of the Project location and setting, as well as the Project components and the discretionary actions required for the Project.

Project Location and Setting

The site is located northwest of the intersection of Wayne Heintz Street and Wyland Drive in the City of Elk Grove, California (see Figure 1 and Figure 2). The approximately 10.38-acre site, identified by APN 134-0110-177, is currently vacant and has been previously graded. The site has a history of dry farming and was previously used as a staging area during development of the surrounding residences. The site currently consists of ruderal grasses that appear to be regularly mowed for weed abatement. Wayne Heintz Street bounds the site to the south and Wyland Drive bounds the site to the east. Surrounding existing uses include single-family residences to the north, east, and west, and the planned Unity Park, single-family residences, and the Saini Walking and Bicycle Trail to the south, across Wayne Heintz Street. The City of Elk Grove General Plan/EEGCP designates the site as PS and the site is zoned RD-5 within the East Elk Grove overlay district.

Project Components

The site was originally planned for a development of an elementary school within the Elk Grove Unified School District (EGUSD), in compliance with the existing land use designation. However, the school district has since determined that a school site is not needed.

Figure 1
Regional Project Location



Figure 2
Project Site Boundaries



The Project includes the development of a residential subdivision consisting of 56 single-family lots with an average size of approximately 5,225 sf, as well as a 0.77-acre LID stormwater facility area located in the southwest corner of the site. The Project requires a GPA/EEGCPA to redesignate the site from PS to LDR, a Rezone for the site from RD-5 to RD-6, approval of a Small Lot Tentative Subdivision Map, and approval of a Subdivision Design Review. The Project components and requested entitlements are discussed in detail below.

General Plan Amendment/Community Plan Amendment

The Project includes a GPA/EEGCPA of the site from PS to LDR (see Figure 3). As specified in the General Plan, LDR uses are generally characterized by single-family detached residential development with a minimum residential density of four dwelling units per acre (du/ac) and a maximum of seven du/ac. The residential density for the Project is 5.8 du/ac (56 lots/9.61 net acres = 5.8 du/ac).

Rezone

The Project includes a Rezone of the site from RD-5 to RD-6 (see Figure 4). According to the Elk Grove Municipal Code, the RD-6 zone allows single-family and two-family homes up to two stories in height, with a maximum density of six du/ac, and a minimum lot size of 4,000 sf. As the Project would include 56 residential lots on approximately 9.61 net acres, the Project would result in a residential density of approximately 5.8 du/ac consistent with the residential density allowance in the RD-6 zone.

Small Lot Tentative Subdivision Map

The proposed Small Lot Tentative Subdivision Map (TSM) subdivides the site into 56 single-family lots with an average lot size of approximately 5,225 sf, and an average density of approximately 5.8 du/ac (see Figure 5). The Small Lot Tentative Subdivision Map also includes an approximately 0.77-acre LID facility and an internal road (A Street). Additional details regarding the proposed access and circulation, landscaping, and utility infrastructure are discussed below. The TSM includes Abandonment of right-of-way that is no longer needed as detailed under the Tentative Map Notes in Figure 5.

Project Site Access and Circulation

Primary access to the site would be provided by two new roadway connections to Wyland Drive via an internal road, A Street. As shown in Figure 5, A Street would extend west into the site from both new intersections along the eastern boundary at Wyland Drive, and would connect in the western portion of the site, creating a looped roadway system. The northeastern Project road connection would create a four way intersection with Quintero Avenue and Wyland Drive. All internal roadways would be public and would include a 44-foot right-of-way (ROW) consisting of two 14-foot travel lanes with three-foot gutters and five-foot sidewalks along both sides of the roadway. The internal roadway network would provide access to all internal single-family residential lots, and would include visibility easements at the turning points of the roadway.

The Project also includes frontage improvements along Wyland Drive and Wayne Heintz Street. Frontage improvements include new five-foot wide sidewalks, three-foot wide curb gutters, six-foot wide parking lanes, and two 12-foot wide driving lanes, as shown in cross sections A and B in Figure 5. The Project also includes a Design Exception to modify the street section for Wyland Drive to have a 42-foot ROW rather than the City standard of 40 feet.

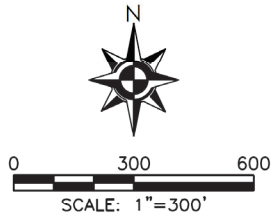
Figure 3
Existing and Proposed General Plan/Eastern Elk Grove Community Plan Land Use Designation



Figure 4
Existing and Proposed Zoning Designation

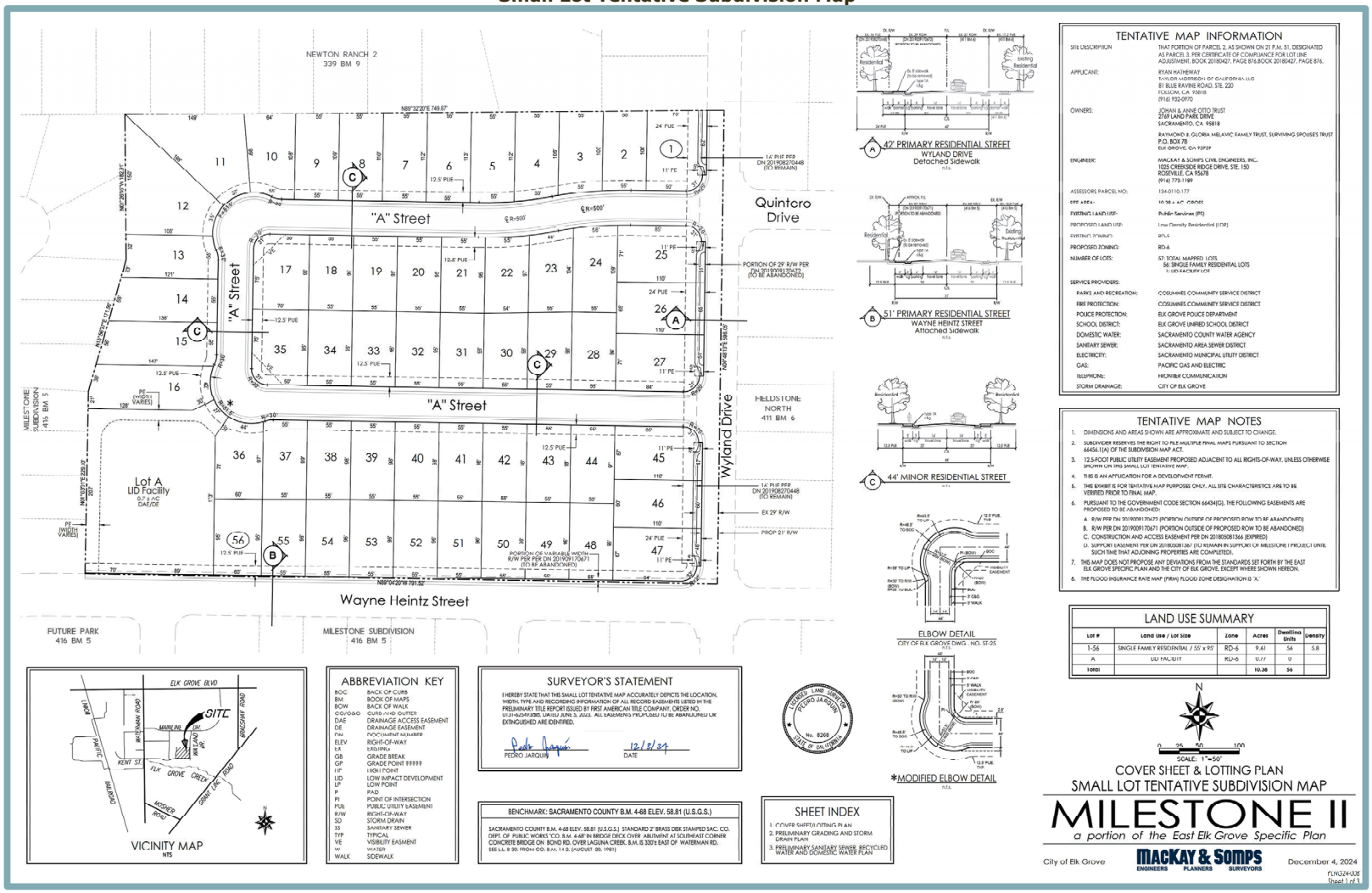






REZONE
SMALL LOT VESTING TENTATIVE SUBDIVISION MAP
MILESTONE II
a portion of the East Elk Grove Specific Plan
City of Elk Grove
MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS
March 06, 2024
Sheet 1 of 3

Figure 5
Small Lot Tentative Subdivision Map



Additionally, the Project includes a Design Exception for Wayne Heintz Street to allow the north side of the road to have an attached sidewalk, rather than the City standard detached sidewalk, which would allow the north side of the road to match the existing development south and west of the Project. The Project also includes a Condition of Approval requiring the Applicant to install a crosswalk equipped with rectangular rapid-flashing beacons at the northwest corner of Wayne Heintz Street and Milepost Circle, southwest of the site, pursuant to City standards.

Landscaping and Open Space

The site does not contain trees, and the Project would not require the removal of trees. The Elk Grove Municipal Code requires that new single-family residential subdivisions provide landscaping improvements consistent with the development standards set forth in Section 23.54.040, Landscape Development Standards, of the Elk Grove Municipal Code. The Project would include the development of a six-foot planter between the sidewalk and curb gutter on Wyland Drive. Pursuant to Elk Grove Municipal Code Chapter 14.10, all landscaping would comply with the State's Model Water Efficient Landscape Ordinance (MWELO) and City of Elk Grove Water Efficient Landscaping Requirements.

Utilities

Sewer service is provided to the Project area by the Sacramento Area Sewer District (SacSewer). As part of the Project, a new network of eight-inch sewer lines would be installed throughout the site and would connect to the existing 10-inch sewer mains within Wyland Drive and Wayne Heintz Street, east and south of the site (see Figure 6).

Water supply to the proposed development is provided by the Sacramento County Water Agency (SCWA). A 12-inch water main currently exists within Wyland Drive. As part of the Project, a new network of eight-inch water lines would be installed on the site and connect to the existing 12-inch water main in Wyland Drive (see Figure 6).

Stormwater generated by impervious surfaces within the site would be captured by a series of curb inlets and manholes and conveyed by way of a system of new 15-, 18-, 24-, 30-, and 42-inch underground storm drains that would direct flows to the proposed Lot A LID stormwater facility in the southwest corner of the site (see Figure 7). An existing 12-inch storm drain line is located in the southern boundary of the LID facility and would allow stormwater collected in the LID stormwater facility to flow to the existing City stormwater system within Wayne Heintz Street. In high-flow conditions, the City stormwater system connection would allow stormwater beyond the capacity of the LID facility to be directed away from future residences and towards the existing gutters along Wayne Heintz Street where they would be captured.

Electricity would be provided by Sacramento Municipal Utilities District (SMUD), and natural gas would be provided by Pacific Gas and Electric (PG&E). The Project would connect to existing electrical and natural gas infrastructure in the Project vicinity.

Subdivision Design Review

Pursuant to Section 23.16.080 of the City of Elk Grove Municipal Code, a Subdivision Design Review is required for any Tentative Subdivision Map within the City. The purpose of the design review process is to ensure physical, visual, and functional compatibility between uses and encourage development in keeping with the desired character of the City.

Figure 6
Preliminary Sanitary Sewer and Water Plan

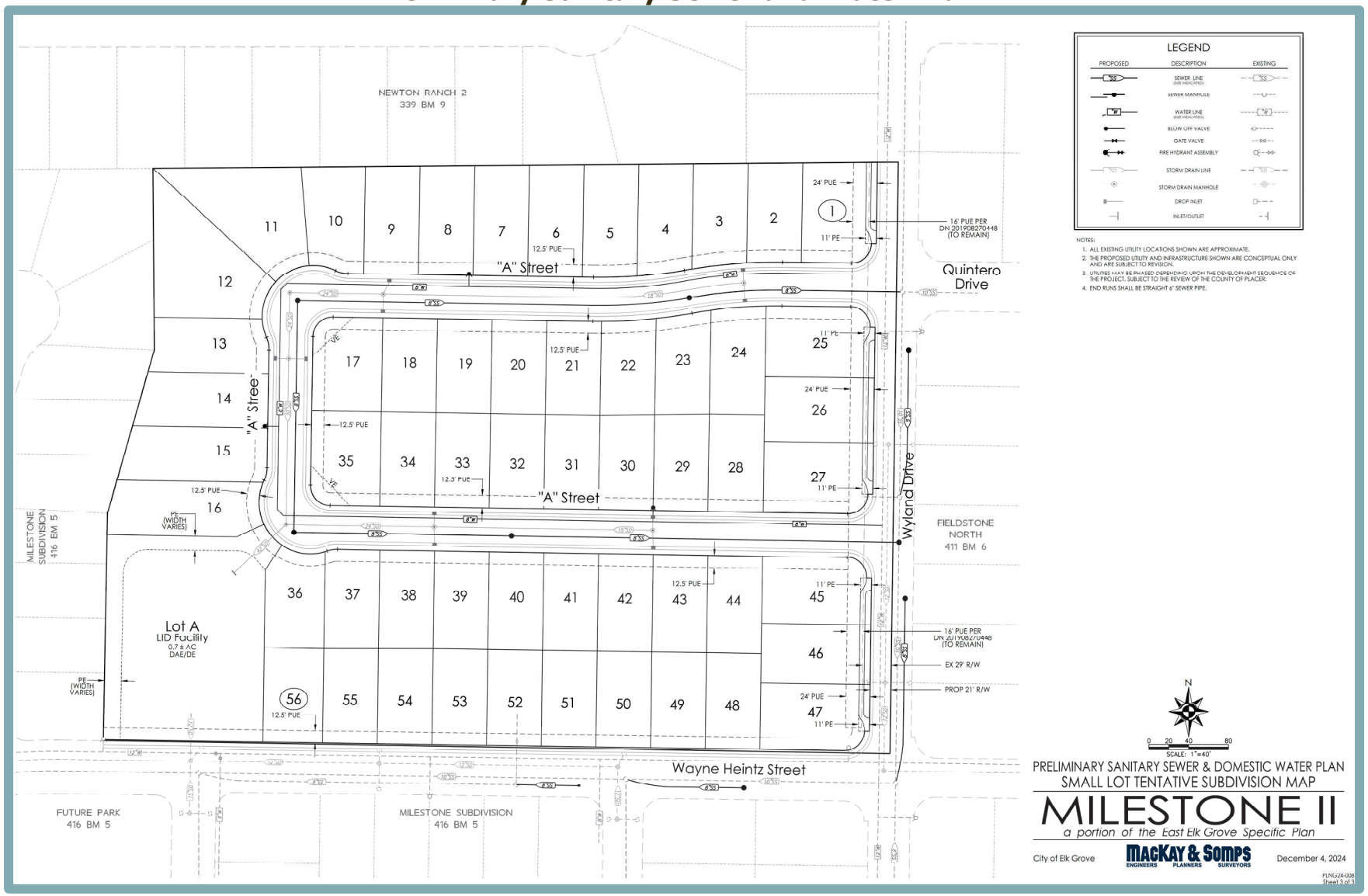
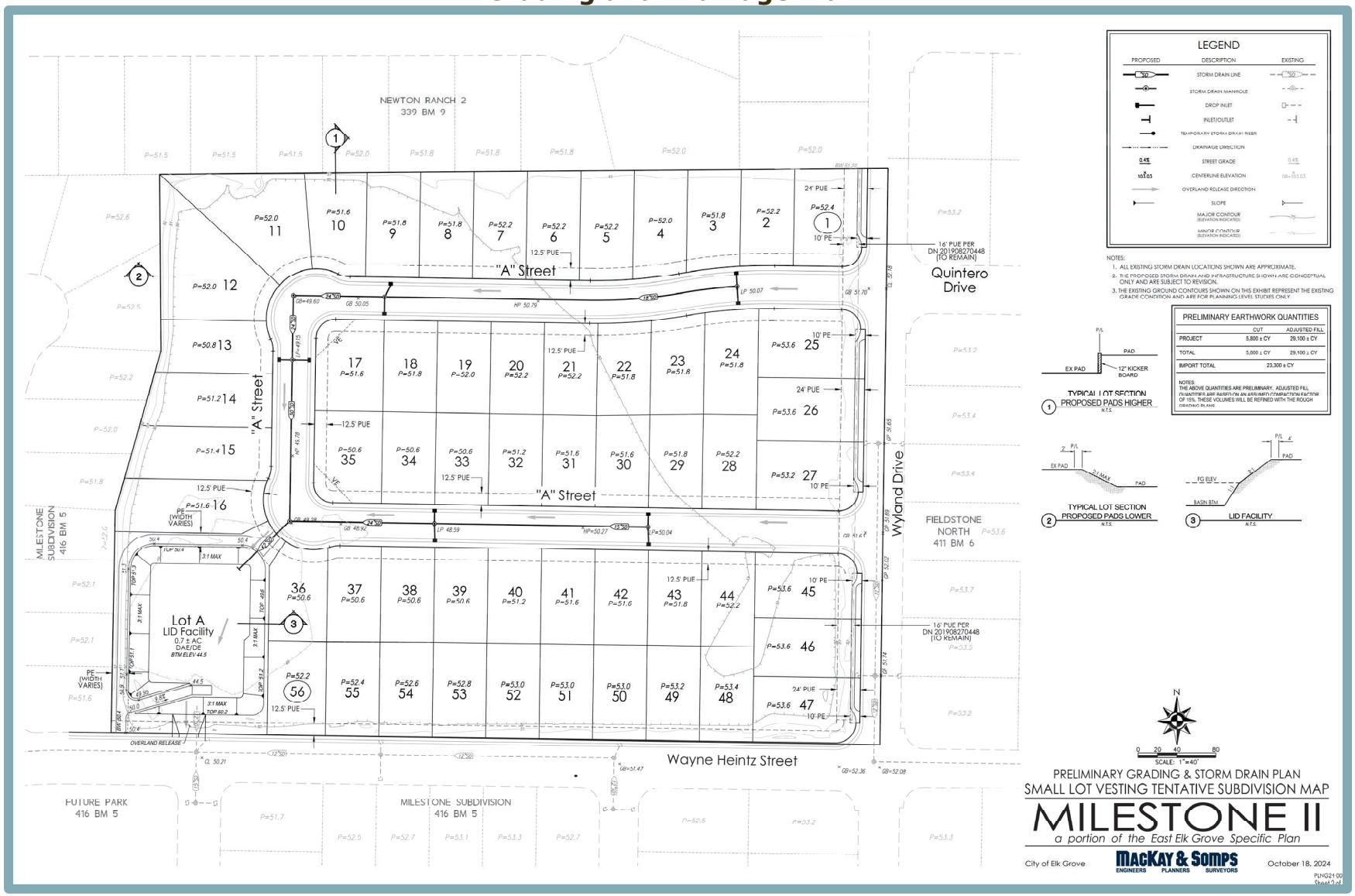


Figure 7
Grading and Drainage Plan



Project Approvals

The Project requires City approval of the following:

- Initial Study/Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program;
- General Plan Amendment/Eastern Elk Grove Community Plan Amendment from PS to LDR;
- Rezone from RD-5 to RD-6;
- Small Lot Tentative Subdivision Map and Abandonment of right-of-way;
- Subdivision Design Review; and
- Determination of Consistency with the General Plan for Abandonment of right-of way that is no longer needed;

In addition, as noted above, the Project would require the approval of a design exception for Wyland Drive to have a 42-foot ROW rather than the City standard of 40 feet and for Wayne Heintz Street to allow an attached sidewalk on the north side of the road, rather than the City standard detached sidewalk.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the Project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are Project-specific mitigation measures recommended, as appropriate, as part of the Project. For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less Than Significant with Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The Project would not have any impact.

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	✖
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	✖
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	✖	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	✖	☐

Discussion

a,b. Examples of typical scenic vistas would include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project's impact to a scenic vista would occur if development of the Project would substantially change or remove a scenic vista. The City's General Plan does not identify any scenic vistas in the Project area. Thus, the proposed residential development would not have a substantial adverse effect on a scenic vista or resource. In addition, according to the California Scenic Highway Mapping System, the nearest State Scenic Highway, State Route (SR) 160, is located approximately 9.02 miles west of the site.[1] As such, the site would not be visible from SR 160.

Based on the above, the Project would not have a substantial adverse effect on a scenic vista and would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Therefore, ***no impact*** would occur.

c. The site is located in an urbanized area. Therefore, the appropriate question is whether the Project conflicts with applicable zoning and other regulations governing scenic quality. The Project includes a Rezone from RD-5 to RD-6 and a GPA/EEGCPA from PS to LDR. The Project would serve as an extension of the existing residential development surrounding the site. As discussed above, the Project includes landscaping elements to screen public views of the site and would be visually compatible with the existing residential development in the site vicinity. Additionally, a design exception for the Project is proposed to allow Wayne Heintz Street to have an attached sidewalk rather than the City standard detached sidewalk, which would allow the north side of the road to match the existing street sections in the Project vicinity.

All components of the Project would be subject to the City's design review process pursuant to Section 23.16.080 of the City's Municipal Code, which is intended to encourage development in keeping with the desired character of the City and to ensure

[1] California Department of Transportation. *List of eligible and officially designated State Scenic Highways*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed February 2025.

physical, visual, and functional compatibility between uses. Furthermore, pursuant to the City's General Plan, the site has been anticipated for development. As such, changes to the visual character and quality of the site have been anticipated by the City. Therefore, impacts related to conflicting with applicable zoning and other regulations governing scenic quality would be ***less than significant***.

d. The site is currently undeveloped and does not contain any existing sources of light or glare. Implementation of the Project would develop the site with single-family residences and, thus, would introduce new sources of light and glare where none currently exist. Potential sources of light and glare associated with the Project would include interior light spilling through residence windows, porch and patio lights, driveway lighting, streetlights, resident and visitor headlights, and light reflected off windows.

While the site does not currently contain sources of light or glare, the site is bordered by existing development that currently generates light and glare in the area. Furthermore, the Project would be subject to compliance with all applicable regulations included in the City's Municipal Code, as well as other applicable development standards. Compliance with such standards ensures that on-site lighting would be directed within the site and would not substantially illuminate adjacent properties. In addition, new landscaping elements along the Project frontages help to further screen the proposed exterior light fixtures.

Given the consistency of the Project with surrounding development, compliance with the City's Design Guidelines and Municipal Code, and the added assurance of the design review process, implementation of the Project would result in a ***less-than-significant*** impact with respect to creating a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

II. AGRICULTURE AND FOREST RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	✖
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
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))?	☐	☐	☐	✖
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
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?	☐	☐	☐	✖

Discussion

a,e. The site is currently vacant and undeveloped and consists primarily of ruderal grasses which are regularly mowed for weed abatement. According to the California Department of Conservation's (DOC's) California Important Farmland Finder, the entire site is designated as "Other Land,"[2] which is not protected under CEQA. In addition, the site is not currently used for agricultural purposes. Thus, implementation of the Project would not result in conflicts with the Farmland Protection Policy Act.

Given the DOC's designation for the site, development of the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use. Therefore, the Project would result in ***no impact***.

b. The site is not under a Williamson Act contract and is not designated or zoned for agricultural uses. Therefore, buildout of the Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and ***no impact*** would occur.

c,d. The Project area is not considered forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), and is not zoned Timberland Production (as defined by Government Code Section 51104[g]). Therefore, the Project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

[2] California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed February 2025.

III. AIR QUALITY. *Would the project:*	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✖	☐
b. 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?	☐	☐	✖	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a,b. The City of Elk Grove is located within Sacramento County, which is within the boundaries of the Sacramento Valley Air Basin (SVAB) and under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Federal and State ambient air quality standards (AAQS) have been established for six common air pollutants, known as criteria pollutants, due to the potential for these pollutants to be detrimental to human health and the environment. The criteria pollutants include particulate matter (PM), ground-level ozone, carbon monoxide (CO), sulfur oxides, nitrogen oxides (NO_X), and lead. At the federal level, Sacramento County is designated as severe nonattainment for the 8-hour ozone AAQS, nonattainment for the 24-hour $PM_{2.5}$ AAQS, and attainment or unclassified for all other criteria pollutant AAQS. At the State level, the area is designated as a serious nonattainment area for the 1-hour ozone AAQS, nonattainment for the 8-hour ozone AAQS, nonattainment for the PM_{10} and $PM_{2.5}$ AAQS, and attainment or unclassified for all other State AAQS.

As a part of the SVAB federal ozone nonattainment area, the SMAQMD works with the other local air districts within the Sacramento area to develop a regional air quality management plan under the Federal Clean Air Act (FCAA) requirement. The regional air quality management plan is called the State Implementation Plan (SIP) which describes and demonstrates how Sacramento County, as well as the Sacramento nonattainment area, would attain the required federal ozone standard by the proposed attainment deadline. In accordance with the requirements of the FCAA, SMAQMD, along with the other air districts in the region, prepared the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Attainment Plan) in December 2008. The California Air Resources Board (CARB) determined that the Ozone Attainment Plan met FCAA requirements and approved the Plan on March 26, 2009, as a revision to the SIP. An update to the plan, the 2017 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Attainment Plan), was prepared and adopted by CARB on November 16, 2017. An additional update to the plan was prepared and adopted by CARB on October 15, 2018, and known as the 2018 Updates to the California SIP.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficulty of attaining federal and State AAQS. Therefore, evaluation of air quality impacts is required. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants for which the area is designated nonattainment, SMAQMD has developed the Guide to Air Quality Assessment in Sacramento County (SMAQMD Guide), which includes

recommended thresholds of significance, including mass emission thresholds for construction-related and operational ozone precursors, as the area is under nonattainment for ozone. The SMAQMD's recommended thresholds of significance for the ozone precursors reactive organic compounds (ROG) and NO_X, which are expressed in pounds per day (lbs/day) and tons per year (tons/yr), are presented in Table 1. As shown in the table, SMAQMD has construction and operational thresholds of significance for PM_{10} and $PM_{2.5}$ expressed in both lbs/day and tons/yr. The construction and operational thresholds for PM_{10} and $PM_{2.5}$ only apply to those Projects that have implemented all applicable Best Available Control Technologies (BACTs) and Best Management Practices (BMPs).

Table 1
SMAQMD Thresholds of Significance

Pollutant	Construction Thresholds	Operational Thresholds
ROG	N/A	65 lbs/day
NO_X	85 lbs/day	65 lbs/day
PM_{10}	80 lbs/day 14.6 tons/yr	80 lbs/day 14.6 tons/yr
$PM_{2.5}$	82 lbs/day 15 tons/yr	82 lbs/day 15 tons/yr

Source: SMAQMD, CEQA Guidelines, April 2020.

The proposed project's construction and operational emissions were quantified as part of the Greenhouse Gas (GHG) Emissions Memorandum prepared for the proposed project by ECORP Consulting Inc (see Appendix A)[3] using the California Emissions Estimator Model (CalEEMod) web-based Version 2022.1.1.28. CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, compliance with the current California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the modeling prepared by ECORP assumed that construction would likely commence in March of 2025 and take place over approximately two years.

The Project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the Project's contribution to cumulative air quality conditions is provided below as well. All CalEEMod results are included as Attachment A of Appendix A to this IS/MND.

Construction Emissions

During construction of the Project, various types of equipment and vehicles would temporarily operate on the Project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction worker commutes, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the Project would generate air pollutant emissions

[3] ECORP Consulting, Inc. *Milestone II Residential Project – Greenhouse Gas Emissions Memorandum.* November 2024.

intermittently within the site and vicinity, until all construction has been completed, construction is a potential concern because the Project is located in a non-attainment area for ozone, PM_{10}, and $PM_{2.5}$.

The Project is required to comply with all SMAQMD rules and regulations for construction, which would be noted on City-approved construction plans. The applicable rules and regulations would include, but would not be limited to, the following:

- Rule 403 related to Fugitive Dust;
- Rule 404 Related to Particulate Matter;
- Rule 407 related to Open Burning;
- Rule 442 related to Architectural Coatings;
- Rule 453 related to Cutback and Emulsified Asphalt Paving Materials; and
- Rule 460 related to Adhesives and Sealants.

To apply the construction thresholds presented in Table 1, projects must implement all feasible SMAQMD BACTs and BMPs related to dust control. The control of fugitive dust during construction is required by SMAQMD Rule 403, and enforced by SMAQMD staff. The BMPs for dust control include the following:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads;
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered;
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited;
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph);
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [CCR, Title 13, Sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site;
- Provide current certificate(s) of compliance for the CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [CCR, Title 13, Sections 2449 and 2449.1]. For more information contact CARB at 877-593-6677, doors@arb.ca.gov, or www.arb.ca.gov/doors/compliance_cert1.html.; and
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Compliance with the foregoing measures is required per Rule 403, and Project construction is assumed to include compliance with the foregoing measures. Consequently, the Project PM emissions are assessed in comparison to the thresholds presented in Table 1 above.

According to the CalEEMod results, the Project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2.

Table 2
Maximum Unmitigated Construction Emissions

Pollutant	Project Emissions	Construction Threshold	Exceeds Threshold?
ROG	51.4 lbs/day	-	**N/A**
NO_X	31.7 lbs/day	85 lbs/day	**NO**
PM_{10}	21.2 lbs/day and 0.32 tons/yr	80 lbs/day and 14.6 tons/yr	**NO**
$PM_{2.5}$	11.4 lbs/day and 0.17 tons/yr	82 lbs/day and 15 tons/yr	**NO**

Source: CalEEMod, July 2024 (see Appendix A).

As shown in the table, the project's construction emissions would be below the applicable SMAQMD thresholds of significance for NO_X, PM_{10}, and $PM_{2.5}$. Accordingly, construction of the Project would not violate an air quality standard or contribute to an existing or projected air quality violation, and a less-than-significant impact would occur associated with construction.

Operational Emissions

Operational emissions of ROG, NO_X, and PM would be generated by the Project from both mobile and stationary sources. Day-to-day activities, such as residential commute vehicle trips to and from the Project site, would make up the majority of the mobile emissions. Emissions would also occur from area sources, such as landscape maintenance equipment exhaust.

The estimated operational emissions for the Project are presented below in Table 3. It should be noted that the Project would not involve installation or operation of any pieces of equipment that would require the implementation of SMAQMD's BACTs; therefore, the Project is subject to SMAQMD's mass emissions thresholds for PM_{10} and $PM_{2.5}$.

Table 3
Maximum Unmitigated Operational Emissions

Pollutant	Project Emissions	Operational Threshold	Exceeds Threshold?
ROG	5.31 lbs/day	65 lbs/day	**NO**
NO_X	3.29 lbs/day	65 lbs/day	**NO**
PM_{10}	4.83 lbs/day and 0.84 tons/yr	80 lbs/day and 14.6 tons/yr	**NO**
$PM_{2.5}$	1.29 lbs/day and 0.22 tons/yr	82 lbs/day and 15 tons/yr	**NO**

Source: CalEEMod, April 2024 (see Appendix A).

As shown in the table above, the project's operational emissions would be below the applicable SMAQMD thresholds of significance for ROG, NO_X, PM_{10}, and $PM_{2.5}$. Accordingly, operational emissions of the Project would not violate an air quality standard or contribute to an existing or projected air quality violation, and a less-than-significant impact would occur associated with operations.

Cumulative Emissions

A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound

those of the project being assessed. Due to the dispersive nature and regional sourcing of air pollutants, air pollution is already largely a cumulative impact. The non-attainment status of regional pollutants, including ozone and PM, is a result of past and present development and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

Adopted SMAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated non-attainment, consistent with applicable air quality plans. As future attainment of AAQS is a function of successful implementation of SMAQMD's planning efforts, according to the SMAQMD Guide, by exceeding the SMAQMD's project-level thresholds for construction or operational emissions, a project could contribute to the region's non-attainment status for ozone and PM emissions and could be considered to conflict with or obstruct implementation of the SMAQMD's air quality planning efforts.

As discussed above, the Project would result in construction and operational emissions below all applicable SMAQMD thresholds of significance. Therefore, the Project would not be considered to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment, and impacts would be considered less than significant.

Conclusion

Because the Project would not result in construction-related or operational emissions of criteria air pollutants in excess of SMAQMD's thresholds of significance, the Project would not be considered to conflict with or obstruct the implementation of any applicable air quality plans. In addition, the Project would not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is non-attainment under an applicable AAQS. Therefore, a ***less-than-significant*** impact would result.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors would be the single-family residences located immediately north and west of the site, and within 50 feet of the site to the east and south.

The major pollutant concentrations of concern are toxic air contaminant (TAC) emissions, which are addressed in further detail below. In addition, a discussion of health effects related to criteria pollutants is provided.

TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended

setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards.[4] The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

Due to the residential nature of the Project, the Project does not include any operations that would be considered a substantial source of TACs. Accordingly, operations of the Project would not expose sensitive receptors to excess concentrations of TACs.

Construction-related activities have the potential to generate concentrations of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction would be temporary and would occur over a relatively short duration in comparison to the operational lifetime of the proposed project. While methodologies for conducting health risk assessments are associated with long-term exposure periods (e.g., over a 30-year period or longer), construction activities associated with the proposed project were estimated to occur over an approximately a year and nine-months period. Only portions of the site would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day rather than continuously at any one location on the project site. In addition, all construction equipment and operation thereof would be regulated pursuant to the In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation includes emissions reducing requirements such as limitations on vehicle idling, disclosure, reporting, and labeling requirements for existing vehicles, as well as standards relating to fleet average emissions and the use of BACTs. Additionally, project construction would be required to comply with all applicable SMAQMD rules and regulations, as detailed above. Construction activities would also be limited to daytime hours (7:00 AM to 7:00 PM), pursuant to Section 6.32.100 of the City Code. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low, and the proposed project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions.

Criteria Pollutants

Recent rulings from the California Supreme Court (including the *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 case regarding the proposed Friant Ranch Project) have underscored the need for analysis of potential health impacts resulting from the emission of criteria pollutants during operations of proposed projects. Although analysis of project-level health risks related to the emission of CO and TACs has long been practiced under CEQA, the analysis of health impacts due to individual projects resulting from emissions of criteria pollutants is a relatively new field. SMAQMD released the *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District* (Guidance) for the analysis of criteria emissions in areas within the SMAQMD's jurisdiction.[5] The Guidance represents SMAQMD's effort to develop a methodology that provides a consistent,

[4] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
[5] Sacramento Metropolitan Air Quality Management District. *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. October 2020.

reliable, and meaningful analysis in response to the Supreme Court's direction on correlating health impacts to a project's emissions.

The Guidance was prepared by conducting regional photochemical modeling, and relies on the U.S. Environmental Protection Agency's (USEPA's) Benefits Mapping and Analysis Program (BenMAP) to assess health impacts from ozone and $PM_{2.5}$. SMAQMD has prepared two tools that are intended for use in analyzing health risks from criteria pollutants. Small projects with criteria pollutant emissions close to or below SMAQMD's adopted thresholds of significance may use the Minor Project Health Effect Screening Tool, while larger projects with emissions between two and six times greater than SMAQMD's adopted thresholds may use the Strategic Area Project Health Screening Tool. Considering the Project would result in emissions lower than the SMAQMD's thresholds of significance, the Project would qualify for use of the Minor Project Health Effects Screening Tool. It is important to note, however, that the Minor Project Health Effects Screening Tool applies the assumption that all small projects result in emissions of criteria pollutants equal to the SMAQMD thresholds of significance. As shown in Table 3, the Project would result in operational emissions well below the SMAQMD thresholds of significance and, thus, the health impacts calculated for the Project using the Minor Project Health Effects Screening Tool are highly conservative. The Project's actual health impacts associated with criteria pollutant emissions would be expected to be much less than what is presented herein based on the aforementioned SMAQMD tool. Results from the Minor Project Health Effects Screening Tool are shown in Table 4.

As shown in the table, according to the Minor Project Health Effects Screening Tool, which is based on the highly conservative assumption that the Project would emit criteria pollutants at levels equal to the SMAQMD thresholds of significance, the Project could result in up to 1.5 premature deaths per year due to the Project's $PM_{2.5}$ emissions and up to 0.03 premature deaths per year due to the Project's ozone emissions. For comparison, the background incidence of premature deaths per year are 44,766 due to $PM_{2.5}$ emissions and 30,386 due to ozone emissions (see Table 4). The Project's contribution represents a very small increase over the background incidence of premature deaths due to $PM_{2.5}$ and ozone concentrations (0.0032 percent and 0.0001 percent, respectively). In addition, according to the Minor Project Health Effects Screening Tool, $PM_{2.5}$ emissions from the Project could result in 0.73 asthma-related emergency room visits, and ozone emissions from the Project could result in 0.57 asthma-related emergency room visits. Such numbers represent a minute increase over the background level of asthma-related emergency room visits (0.0039 percent and 0.0033 percent, respectively).

Furthermore, the SMAQMD criteria pollutant thresholds of significance were established with consideration given to the health-based air quality standards established by the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), and are designed to aid the district in achieving attainment of the NAAQS and CAAQS. The thresholds of significance represent emissions levels that would ensure that Project-specific emissions would not inhibit attainment of regional NAAQS and CAAQS and, therefore, would not adversely affect public health.

Considering that implementation of the Project would not result in emissions of criteria pollutants that exceed the SMAQMD standards, the Project would not inhibit attainment of regional NAAQS and CAAQS and would not result in adverse health impacts related to the emission of criteria pollutants.

Table 4
Health Effects from Project

Health Endpoint	Age Range[1]	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year)[2] (Mean)	Percent of Background Health Incidences Across the 5-Air-District Region[3] (%)	Total Number of Health Incidences Across the 5-Air-District Region (per year)[4]
Respiratory $PM_{2.5}$				
Emergency Room Visits, Asthma	0-99	0.73	0.0039	18,419
Hospital Admissions, Asthma	0-64	0.048	0.0026	1,846
Hospital Admissions, All Respiratory	65-99	0.22	0.0011	19,644
Cardiovascular $PM_{2.5}$				
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	0.12	0.0005	24,037
Acute Myocardial Infarction, Nonfatal	18-24	0.000	0.0016	4
Acute Myocardial Infarction, Nonfatal	25-44	0.006	0.0018	308
Acute Myocardial Infarction, Nonfatal	45-54	0.014	0.0019	741
Acute Myocardial Infarction, Nonfatal	55-64	0.022	0.0018	1,239
Acute Myocardial Infarction, Nonfatal	65-99	0.078	0.0016	5,052
Mortality $PM_{2.5}$				
Mortality, All Cause	30-99	1.5	0.0032	44,766
Respiratory Ozone				
Hospital Admissions, All Respiratory	65-99	0.04	0.0002	19,644
Emergency Room Visits, Asthma	0-17	0.22	0.0038	5,859
Emergency Room Visits, Asthma	18-99	0.35	0.0028	12,560
Mortality Ozone				
Mortality, Non-Accidental	0-99	0.03	0.0001	30,386

[1] Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.

[2] Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects are shown for the 5-Air-District Region.

[3] The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, the background incidence rates cover the 5-Air-District Region (estimated 2035 population of 3,271,451 persons). Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

[4] The total number of health incidences across the 5-Air-District Region is calculated based on the modeling data. The information is presented to assist in providing overall health context.

Source: SMAQMD, Minor Project Health Effects Screening Tool. February 2025 (see Appendix B).

The results of the Minor Project Health Effects Screening Tool have been presented for informational purposes only. Overall, because the Project is relatively small compared to the regional growth and development that drives health impacts from criteria pollutants, and the anticipated air quality emissions would fall below all applicable thresholds of significance, potential health impacts related to criteria air pollutants would be less than significant.

Conclusion

Based on the above discussion, the Project would not expose any sensitive receptors to substantial concentrations of TACs or criteria pollutants during construction or operation. Consequently, the Project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in Questions 'a' through 'c' above. Therefore, the following discussion focuses on emissions of odors and dust.

Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, it is difficult to quantitatively determine the presence of a significant odor impact. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The Project would not introduce any such land uses.

Construction activities often include diesel fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, as discussed above, construction activities would be temporary, and operation of construction equipment adjacent to existing residential uses would be restricted to the hours of 7:00 AM to 7:00 PM, pursuant to City Code Section 6.32.100. Project construction would also be required to comply with all applicable SMAQMD rules and regulations, particularly SMAQMD Rule 402 (Nuisance), which prohibits any person or source from emitting air contaminants that cause detriment, nuisance, or annoyance to a considerable number of persons or the public. Rule 402 is enforced based on complaints. If complaints are received, SMAQMD is required to investigate and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not anticipated, if odor complaints are made after the proposed project is approved, the SMAQMD would ensure that such odors are addressed, and any potential odor effects reduced to less than significant.

Dust

As noted previously, construction of the Project is required to comply with all applicable SMAQMD rules and regulations, including, but not limited to, Rule 403 (Fugitive Dust) and Rule 404 (Particulate Matter). Furthermore, all projects within Sacramento County are required to implement the SMAQMD's Basic Construction Emission Control Practices (BCECP). Compliance with SMAQMD rules and regulations and BCECP would help to ensure that dust is minimized during Project construction. Following Project construction,

vehicles operating within the Project site would be limited to paved areas of the site, which would not have the potential to create substantial dust emissions. Thus, Project operations would not include sources of dust that could adversely affect a substantial number of people.

Conclusion

Based on the above, construction and operation of the proposed project would not result in emissions, such as those leading to odors and/or dust, that would adversely affect a substantial number of people, and a ***less-than-significant*** impact would occur.

IV. BIOLOGICAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	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?	☐	✖	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	✖	☐	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	✖	☐	☐
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	✖	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	✖
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	✖

Discussion

a. Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal and State Endangered Species Acts. Both Acts afford protection to listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, sensitive species included in USFWS Recovery Plans, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA Guidelines Section 15380. In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. In addition, plant species on California Native Plant Society (CNPS) Lists 1 and 2 are considered special-status plant species and are protected under CEQA (CEQA Guidelines Section 15380[b][2]).

The following discussion is based on the Biological Resources Assessment (BRA), the Special-Status Plant Survey, and the Aquatic Resources Delineation (ARD) prepared for

the Project by Madrone Ecological consulting (Madrone) (see Appendix C, Appendix D, and Appendix E).[6,7,8] The results of the BRA prepared for the Project are presented below.

Existing Setting

The site is currently undeveloped and has been previously graded, with an on-site elevation of approximately 50 feet above mean sea level (amsl). The site generally consists of ruderal grasses that appear to be regularly mowed for weed abatement. The site was historically used for dry farming. Additionally, the BRA noted that the site was used as a staging area for construction of the surrounding development in 2018.

On October 28, 2024, and January 22, 2025, Madrone conducted biological reconnaissance surveys of the site to map vegetation communities, evaluate the presence of and map potential aquatic resources, and assess the potential for special-status species and sensitive habitats to be present on-site. In addition, the California Natural Diversity Data Base (CNDDB), CNPS Inventory of Rare and Endangered Plants, USFWS Information for Planning and Consultation (IPaC), verified records from Bumblebee Watch (BBW), the Western Monarch Milkweed Mapper (WMMM), Western Monarch Overwintering Site viewer, research-grade observations from iNaturalist, confirmed nesting records from the Cornell Laboratory of Ornithology's eBird database, and the Western Bat Working Group (WBWG) Species Matrix were reviewed.

In addition, a number of previous reports and permits were prepared/obtained for the Project area, are applicable to this site, and were reviewed in preparation of this document. Such resources include:

- *Crooked Creek East Nationwide Permit Authorization* (Attachment D to the BRA),
- *Listed Vernal Pool Branchiopod Wet Season Survey 90-Day Report Melavic Property* (Gibson & Skordal 2008);
- *Dry-Season Sampling for Federally Listed Large Branchiopods at the Crooked Creek Project, Elk Grove, Sacramento County, California* (Helm Biological Consulting 2016);
- *2016 – 2017 Wet-Season Branchiopod Survey 90-Day Report Crooked Creek Properties* (Madrone 2017); and
- *Mitigated Negative Declaration/Initial Environmental Study for Crooked Creek Estates* (City of Elk Grove 2004).

The results of the site survey, and literature reviews are discussed below.

Special-Status Plants

According to the results of the literature review and site survey, Madrone determined that one special-status plant species (Dwarf downingia [*Downingia pusilla*]), has the potential to occur on or in the vicinity of the site.

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6 Madrone Ecological Consulting. *Biological Resources Assessment Milestone II Elk Grove, Sacramento County, California. June* 2025.

7 Madrone Ecological Consulting. *Special-Status Plant survey Report, Milestone II Elk Grove, Sacramento County, California. May* 2025.

8 Madrone Ecological Consulting. *Aquatic Resources Delineation Report, Milestone II Elk Grove, Sacramento County, California. May* 2025.

Dwarf downingia is not federally or state listed, but it is classified as a California Rare Plant Ranks (CRPR) List 1B.2 plant. Dwarf downingia is a diminutive annual herb that is strongly associated with vernal pools and other seasonally inundated features at elevations ranging from sea level to approximately 1,500 feet. Dwarf downingia blooms from March to May and is typically associated with areas that experience a moderate degree of disturbance. Two records of dwarf downingia have been identified within five miles of the Project area in the CNDDB. The nearest of the occurrence (CNDDB Occurrence #55) is located approximately 1.8 miles north near the intersection of Bond and Waterman, and has been extirpated by recent development.

A special status plant survey for the site was conducted on April 11, 2025 to determine if special status plant species, primarily dwarf downingia, were present on the site. The special-status plant survey consisted of a meandering pedestrian survey of the site, which was floristic in nature, and identified all on-site plant species to the taxonomic level necessary to determine the rarity of the plant specimen. As such, if a special-status plant was present on the site, the plant would have been detected and documented, even if the plant was not included on the target-species list as identified by the preliminary CRPR and CNDDB searches. According to the Special-Status Plant Survey Report, while the site includes marginal habitat for the aforementioned species, neither dwarf downingia nor any other special-status plant species, were observed during the special-status plant surveys. As such, impacts to special-status plant species as a result of the Project are unlikely.

Special-Status Wildlife

Based on field observations and literature review the BRA concluded that the following five special-status wildlife species have the potential to occur on the site: Crotch bumble bee, monarch butterfly, burrowing owl, Swainson's hawk, and white-tailed kite. In addition, other nesting or foraging migratory birds and raptors protected under federal, State, and local laws also have the potential to occur on the site.

Crotch Bumble Bee

Crotch bumble bee (***Bombus crotchii***) has a limited distribution in southwestern North America. The aforementioned species occurs primarily in California, including the Mediterranean region, Pacific Coast, West Desert, Great Valley, and adjacent foothills through most of southwestern California. In California, Crotch bumble bee inhabits open grasslands and scrub habitats.

All bumble bees have three basic requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the entirety of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Nests are often located underground in abandoned holes made by ground squirrels, mice, and rats or occasionally abandoned bird nests. Some species nest on the surface of the ground (in tufts of grass) or in empty cavities. Bumble bees that nest aboveground may require undisturbed areas with nesting resources such as grass and hay to protect nests. Furthermore, areas with woody cover, or other sheltered areas provide bumble bees sites to build their nests (e.g., downed wood, rock walls, brush piles, etc.). Generally, bumble bees overwinter in soft, disturbed soil, under leaf litter or other debris, in abandoned holes made by fossorial mammals or occasionally in abandoned bird nests. Some species nest on the surface of the ground (in grassy tussocks) or in empty cavities (hollow logs, dead trees, under rocks, etc.). Queens most likely overwinter in small cavities just below or on the ground surface.

Bumblebees depend on the availability of habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. As generalist foragers, bumblebees do not depend on any one flower type, but generally prefer purple, blue, or yellow flowers of the Apocynaceae, Asteraceae, Boraginacea, Fabacea, and Lamiaceae families. The CNDDB does not list any occurrences of Crotch bumble bee within five miles of the Project area. The nearest sighting recorded in Bumble Bee Watch is one Crotch bumble bee documented about 7.5 miles to the southwest, at Franklin Field in April 2024. The iNaturalist database shows one research grade record about six miles to the northwest of the Project area along Santorini Drive in western Elk Grove, recorded in April 2024.

According to the BRA, while nesting or overwintering habitat on-site is sparse, the annual grassland within the Project area represents suitable habitat for Crotch bumble bee, and the disturbance and/or removal of the grassland habitat could adversely affect Crotch bumble bee if construction activity results in the removal of active nests. Thus, in the absence of mitigation, implementation of the Project could result in adverse effects to Crotch bumble bee.

Monarch Butterfly

According to the BRA, monarch butterfly is a threatened species under the Federal Endangered Species Act (FESA), the listing was precluded by higher priority listing actions. Monarch butterflies roost in wind protected tree groves, especially with *Eucalyptus* sp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed. Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring. The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant and larvae emerge after two to five days. Larvae develop over a period of nine to 18 days, feeding on the milkweed and then pupate into chrysalis before eclosing six to 14 days later as an adult butterfly. Multiple generations of monarchs are produced during the breeding season, with most adult butterflies living approximately two to five weeks.

CNDDB did not identify any occurrences of Monarch Butterfly within five miles of the Project area, but the CNDDB only tracks over-wintering locations of the foregoing species, which occur near the coast. iNaturalist reports six research-grade records of monarch butterflies within five miles of the Project area. The WMMM shows three records of monarchs within five miles of the Project area. One of the iNaturalist records documents monarch breeding. The site is not proximate to any overwintering areas for the species.

Monarch Butterfly was not observed in the Project area during Project-related surveys; however, a small patch of what appear to be narrowleaf milkweed (*Asclepias fascicularis*) plants (based on prior year's stems) occur within the Project area, which represent larval host plants for this species. If milkweed plants are removed during construction, and monarch eggs, larvae, and/or chrysalis are present, individual Monarch butterflies could be adversely affected. Thus, in the absence of mitigation, implementation of the Project could result in adverse effects to Monarch butterfly.

Burrowing Owl

Burrowing owl is a candidate for listing under the California Endangered Species Act (CESA). Burrowing owl generally occurs in a variety of open, arid habitats; typically grasslands, desert scrub, agricultural fields, washes, and disturbed areas such as golf courses or vacant lots. Burrows, perch sites, and friable soil are vital habitat components for the species, and habitats with low-lying, sparse vegetation are preferred. Ground squirrel burrows and other fossorial mammal burrows are typically used for nesting and as year-round refuge sites. The species may also utilize culverts, abandoned pipes, rubble piles, and other manmade structures if burrows are absent. The breeding season for burrowing owls is from February 1 to August 31.

The annual grasslands within the site represent marginally suitable foraging habitat for Burrowing Owl, particularly due to the small patch size and lack of ground squirrel burrows for nesting habitat. In addition, debris in various locations throughout the Project area could provide marginally suitable nesting or wintering refugia. The CNDDB lists 7 records for burrowing owl within five miles of the Project area, the closest of which was recorded in 2010 approximately 2.7 miles southwest of the Project area, near Kammerer Road and Lent Ranch Parkway (CNDDB Observation #1631). The closest eBird record is from 2001 and is approximately 0.6 miles southeast of the Project area, at the Elk Grove airport.

Because several documented occurrences for the species exist within the vicinity of the site, and because the site provides suitable nesting and foraging habitat, burrowing owl has the potential to occur within the site. If ground disturbance occurred while burrowing owls were in refugia, individuals of this species could be adversely affected. If burrowing owls were found foraging in the annual grassland, removal of the annual grassland by residential development could reduce potential foraging opportunities. Thus, in the absence of mitigation, implementation of the Project could result in adverse effects to burrowing owl.

Swainson's Hawk

Swainson's hawk is a State-listed threatened species. The species is a long-distance migrant with nesting grounds in western North America, and wintering grounds in Mexico and South America. Swainson's hawks typically arrive in the California Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to August, peaking in late May through July. In the Central Valley, Swainson's hawks generally nest in isolated trees, small groves of trees in agricultural land, or in large woodlands next to open grasslands or agricultural fields. The species typically nests near riparian areas; however, it has been known to nest in urban areas as well. Nest locations are usually in close proximity to suitable foraging habitats, which include fallow fields, all types of grasslands, irrigated pastures, alfalfa, and other hay crops, and low-growing row crops, especially post-harvest when the height of the vegetation is short and easy to observe prey. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September.

The annual grasslands throughout the site represent marginal foraging habitat for Swainson's hawk, and trees are present in the vicinity of the site that represent suitable nesting habitat. The CNDDB documents 66 records of nesting Swainson's hawk within five miles of the site, the closest of which (approximately 0.5 miles to the southwest) was documented in 2003 in a Eucalyptus tree in a residential area (CNDDB Occurrence

#2251). eBird includes numerous observations of Swainson's hawks within five miles of the CNDDB over the last 10 years.

The Project would result in the loss of suitable foraging habitat for Swainson's hawk. In 2003, the City established and adopted Elk Grove Municipal Code Chapter 16.130, Swainson's Hawk Impact Mitigation Fees, which establishes mitigation policies tailored for projects in Elk Grove that have been determined through the CEQA process to result in a "potential significant impact" on Swainson's hawk foraging habitat and are zoned for agricultural use. Chapter 16.130 of the Elk Grove Municipal Code serves as a conservation strategy that is achieved through the selection of appropriate replacement lands and through management of suitable habitat value on those lands in perpetuity.[9] The site is not currently zoned for agricultural use and, thus, development of the Project would not trigger a requirement for compliance with the City's Swainson's hawk mitigation ordinance, mentioned above. However, according to the BRA prepared for the Project, mitigation for the potential loss of Swainson's hawk foraging habitat has already been provided pursuant to City standards through the implementation of a 36.12-acre conservation easement and applicable Swainson's Hawk Impact Mitigation fees, as provided in Appendix E of the BRA. Thus, implementation of the Project would not result in adverse effects to foraging Swainson's hawk. However, because several documented occurrences for the species exist within the vicinity of the site, and because suitable nesting habitat occurs within the site vicinity, Swainson's Hawk has the potential to occur in site vicinity. If construction activities occurred in proximity to nesting Swainson's hawk, individuals of this species could be adversely affected. Thus, in the absence of mitigation, implementation of the Project could result in adverse effects to nesting Swainson's Hawk.

White-Tailed Kite

White-tailed kite is listed as a CDFW Fully Protected species. The species occurs in a variety of open habitats, typically grassland, agricultural, oak woodland, riparian woodland, and open suburban areas. White-tailed kites are a yearlong resident in the Central Valley, and typically nest from March through June in trees within riparian or edge habitats, oak woodland, and savannah habitats, or in lone trees that are adjacent to foraging habitat. Foraging habitat consists of a variety of open habitats that contain a high rodent population; especially grasslands, pastures, alfalfa fields, and other agricultural crops/fields.

The annual grasslands throughout the Project area represent marginal foraging habitat for white-tailed kite, and trees are present in the vicinity of the Project area that represent suitable nesting habitat. The CNDDB documents one record of nesting white-tailed kite within five miles of the Project area, located approximately 3.8 miles south of the Project area near the intersection of Dillard Road and SR 99 (CNDDB Occurrence #18). eBird includes numerous observations of white-tailed kites within five miles of the Project area over the last 10 years.

Because documented occurrences for the species existing within the vicinity of the Project area, nesting habitat occurs near the site, and the site contains suitable foraging habitat,

[9] City of Elk Grove. *Swainson's Hawk Program.* Available at: https://www.elkgrovecity.org/resources-and-policies/swainsons-hawk-program#:~:text=In%202003%2C%20the%20City%20established,to%20result%20in%20a%20%22potential. Accessed February 2025.

white-tailed kite has a potential to occur. Thus, in the absence of mitigation, implementation of the Project could result in adverse effects to white-tailed kite.

Nesting and Foraging Migratory Birds and Raptors

Suitable nest locations for migratory birds and raptors include, but are not limited to trees, shrubs, herbaceous vegetation and bare ground. The potential exists for migratory birds and raptors protected under the MBTA to nest within the bare ground on the site. Project activities such as clearing, grading, and other ground-disturbing activities during the avian nesting season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance. As such, in the absence of mitigation, implementation of the Project could result in adverse effects to nesting migratory birds and raptors that are protected under the MBTA.

Conclusion

Based on the above, ground-disturbing activities associated with construction of the Project would modify existing habitat and, therefore, could result in indirect adverse effects to Crotch bumble bee, monarch butterfly, burrowing owl, Swainson's hawk, white-tailed kite, and other nesting migratory birds and raptors protected by the MBTA. As such, the Project could result in an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS. Therefore, the impact would be ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

Crotch Bumble Bee

IV-1. If Project activities will result in development within annual grassland, then:

- *Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between September 1st and March 31st (i.e., outside the colony active period), if feasible, to avoid impacts on Crotch bumble bee.*
- *If completing all initial ground-disturbing work between September 1st and March 31st is not feasible, then a qualified biologist conducting biological resource surveys within California shall conduct a pre-construction survey for Crotch bumble bee in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast, and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which*

represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.

- *At a minimum, pre-construction survey methods shall include the following:*
    - *Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.*
    - *If bumble bees are observed, attempt to photograph the individual and identify it to species.*
    - *If Crotch bumble bees are observed, watch the individuals and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.*
    - *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.*
    - *If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than four inches to assist with locating the nest.*
    - *Look for concentrated special-status bumble bee activity.*
    - *Listen for the humming of a nest colony.*
- *The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could otherwise harm special-status bumble bees. The report shall be submitted to the City Community Development Department prior to the commencement of construction activities.*
- *If bumble bees are not located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then further mitigation or coordination with the City and/or CDFW is not required.*
- *If any sign(s) of a bumble bee nest is observed, and/or if it cannot be established that the species present is not a special-status bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identified as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate Biological Resources Assessment mitigation measures, which may*

include but not be limited to waiting until the colony active season ends; establishment of nest buffers; or obtaining an Incidental Take Permit (ITP) from CDFW.

- *The Project proponent is recommended, but not required, to also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying special-status bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.*
- *If, after coordination with CDFW, impacts to Crotch bumble bee cannot be avoided, the Project proponent shall obtain an ITP from CDFW prior to the City's approval of permits authorizing construction, and the Project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the Project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.*

Because Crotch bumble bee is a candidate species, appropriate mitigation measures are still being developed and refined. The foregoing measures have been developed based on current literature and research and CDFW's Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023). If at a later date a different mitigation is determined to be more appropriate, such mitigation shall be used in replacement of the requirements listed above. Proof of compliance shall be submitted to the City Community Development Department for review and approval.

Monarch Butterfly

IV-2. *If construction will occur within annual grassland during the time when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September), a pre-construction survey shall be conducted by a qualified biologist no earlier than 15 days prior to construction within the proposed impact area and a 50-foot buffer in accessible areas (cumulatively, Survey Area). The biologist shall comprehensively search the Survey Area for milkweed plants, and all milkweed plants found shall be surveyed for monarch eggs, larvae (i.e., caterpillars), and chrysalises. Additionally, other plants immediately adjacent to milkweed plants shall also be searched for chrysalises. If no eggs, caterpillars, or chrysalises are detected, additional mitigation measures are not necessary.*

If eggs, caterpillars or chrysalises are found, the plants shall be avoided with a 50-foot buffer until metamorphosis is completed and adult butterflies emerge and voluntarily leave the host plant. If the eggs, larvae, or chrysalises cannot be avoided, all eggs, larvae, and chrysalises, including the portion of the plant to which they are attached, will be translocated to

an alternative location. That location must be a minimum of 50 feet outside of the impact area and contain a similarly sized or larger population of larval host plants. The portions of the plants supporting eggs or chrysalises shall be tied to the live stem of the avoided larval host plant while caterpillars will be placed directly on a stem or leaf of a larval host plant. Should the species be listed under FESA in the future, coordination with USFWS shall be conducted prior to translocation.

The results of the pre-construction survey and proof of compliance with the avoidance measures (if required) shall be submitted to the City's Community Development Department for review and approval.

Burrowing Owl

IV-3. *A pre-construction survey for burrowing owls within the site and a 500 foot buffer surrounding the site shall be conducted within 15 days of Project construction. The pre-construction survey shall be conducted by a qualified biologist consistent with the CDFW 2012 Staff Report on Burrowing Owl Mitigation. If a lapse in Project-related work of 15 calendar days or longer occurs, an additional survey shall be required prior to reinitiation. A written summary of the survey results shall be submitted to the City of Elk Grove Community Development Department before any construction permits are issued. If burrowing owls or active burrows/refugia are not found, then further mitigation measures are not necessary.*

If an active burrow (i.e., a burrow occupied by at least one adult burrowing owl) is found, the Project applicant shall implement the following measures:

1. *Avoid all nest sites that could be disturbed by Project construction during the remainder of the breeding season or while the nest is occupied by adults or young (including individuals or family groups foraging on or near the site following fledging); and*
2. *Establish and maintain a minimum buffer of 164 feet around the occupied burrow during construction. The actual buffer size shall be determined by the qualified biologist based on the time of year and level of disturbance in accordance with guidance provided in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) and may be as large as 1,640 feet. Construction activities shall not take place within the buffer, and the no-disturbance buffer shall be marked on-site. Any modifications to the aforementioned buffer shall be approved by the City in consultation with CDFW. The buffer reduction request shall include relevant information and/or propose new measures to justify the buffer reduction. The buffer may be removed once the burrow is not occupied.*
3. *Burrow exclusion shall only be conducted during the non-breeding season for active burrows located within the site boundaries, and in limited instances within a buffer zone around the site, as determined by the City in consultation with CDFW after all avoidance and minimization measures have been exhausted. The Project applicant shall acquire an Incidental Take Permit (ITP) from CDFW prior to exclusion. Following the ITP, any exclusion and burrow collapse activities shall be conducted in accordance with the CDFW*

Staff Report on Burrowing Owl Mitigation. The foregoing guidance requires a Burrowing Owl Exclusion Plan to be developed and approved by a qualified biologist in consultation with CDFW for the City's review and approval prior to burrow exclusion and/or closure.

If nesting burrowing owls are found during the pre-construction survey, mitigation for the permanent loss of burrowing owl foraging habitat (defined as all areas of suitable habitat within 250 feet of the active burrow) shall be accomplished at a 1:1 ratio or at a ratio acceptable to the City. The mitigation provided shall be consistent with recommendations in the CDFW Staff Report on Burrowing Owl Mitigation and may be accomplished within the Swainson's hawk foraging habitat mitigation area already established for the Project if burrowing owls have been documented utilizing that area, or if the qualified biologist, the City, and CDFW collectively determine that the previously completed mitigation area is suitable for both species.

Swainson's Hawk

IV-4(a). Prior to the commencement of construction activities during the nesting season for Swanson's hawk (approximately March 1 to September 15), a qualified biologist shall conduct at least two preconstruction surveys for active nests within 0.25-mile of the Project area. If feasible, one survey should occur in period II (March 20 – April 5) and one survey should occur in period III (April 5 – April 20) as indicated in the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000).If the final survey is completed more than 14 days prior to initiation of construction, an additional survey shall be conducted no more than 14 days prior to the start of construction to ensure that nesting has not been initiated within the intervening time. If construction begins prior to or after the period II or III dates, two surveys shall be completed no more than 14 days prior to the start of construction, with the second survey being at least 48 hours following the first survey. If portions of the survey area outside of the Project site are inaccessible for any reason, the qualified biologist shall use binoculars to visually determine whether Swainson's hawk nests occur within the 0.25-mile survey area. A letter report with the pre-construction survey results shall be provided to the City of Elk Grove within 30 days of the final survey. The survey results shall only be valid for the year in which they are conducted.

If no active Swainson's hawk nests are identified on or within 0.25 mile of the Project site, no further avoidance and minimization measures for Swainson's hawk nesting habitat are required.

If active Swainson's hawk nests are found within 0.25-mile of the area where construction activities will occur, the qualified biologist shall contact the City of Elk Grove within one business day following the pre-construction survey to report the findings and no construction shall commence within 0.25-mile until the qualified biologist prepares a take avoidance plan. For the purposes of this mitigation measure, construction activities are defined to include heavy equipment operation associated with vegetation clearing, grading, construction (use of cranes or draglines, new rock crushing) or

other Project-related activities that could cause nest abandonment or forced fledging within 0.25-mile of a nest site. The take avoidance plan shall be prepared by a qualified biologist and submitted to the City of Elk Grove and CDFW for review, and shall be approved by the City of Elk Grove. Such a plan shall address appropriate construction setbacks (no-disturbance buffers), placement of high-visibility construction fencing along the setback boundaries, and monitoring of the nest during construction activities. The qualified biologist shall have the authority to stop construction activities if nesting hawks or young in the nest show signs of distress; if this occurs, construction may not resume until the City of Elk Grove is consulted and the construction setback is increased, the young have fledged or the nest is no longer active, or other take-avoidance measures are modified to the satisfaction of the qualified biologist. If implementation of take avoidance measures are required, a letter report describing implementation of the take avoidance measures will be submitted to the City of Elk Grove within 30 days of the final monitoring event. No further avoidance and minimization measures for nesting habitat would be required once the qualified biologist determines that the nest is no longer active.

Nesting Migratory Birds and Raptors (Including White-Tailed Kite)

IV-5(a). *If vegetation clearing, grading and/or construction activities are planned to occur during the migratory bird nesting season (February 1 to August 31), a preconstruction survey to identify active migratory bird nests shall be conducted by a qualified biologist within three days prior to construction initiation. The survey shall be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within a 500-foot radius of proposed construction areas. If portions of the survey area outside of the site are inaccessible for any reason, the qualified biologist shall use binoculars to scan visible potential habitat from any accessible locations within the survey area. If no active nests are found, no further mitigation is required. If a break in construction activity of more than two weeks occurs within the breeding season, then another survey shall be conducted prior to the resumption of work.*

IV-5(b). *No-disturbance buffers shall be established around active nests. Buffer distances shall be based on site conditions, each avian species, and the species' degree of acclimation to disturbance, as determined by a qualified biologist. Typically, 500 foot buffers are appropriate for most raptors, and 100 foot buffers for most songbirds. The perimeter of the no-disturbance buffers shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the no-disturbance buffer areas, except with approval of the biologist. The no-disturbance buffers may be reduced if a smaller buffer is proposed by the qualified biologist and approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). The qualified biologist shall visit the nest as needed to determine when the young have fledged the nest and are independent of the site, or until the qualified biologist determines that the nest is not active.*

Should construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest in a way that would be considered a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior, or as otherwise required through consultation with CDFW and the City. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. Construction activities may only resume within the buffer zone after a follow-up survey by the qualified biologist has been conducted and a report indicating that the nest(s) are not active, and that new nests have not been identified has been submitted to the City of Elk Grove Community Development Department.

IV-6. *Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will address the state and federal Endangered Species Act (FESA); the Clean Water Act and/or Porter-Cologne; the Project's permits and CEQA documentation and associated mitigation measures; consequences and penalties for violation or noncompliance with applicable laws and regulations; identification of special-status wildlife; location of any avoided resources; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated avoidance areas during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. If not already required, fencing and signage around the boundary of avoidance areas may be helpful. Proof of compliance with the aforementioned requirements shall be provided to the City of Elk Grove Community Development Department for review and approval.*

b,c. A U.S. Army Corps of Engineers (USACE) Nationwide Permit Authorization was prepared for the Project area on June 21, 2017, which included a map showing that aquatic resources were not located within the site.

However, as discussed above, Madrone conducted biological reconnaissance surveys of the site on October 28, 2024, and January 22, 2025. As part of the surveys, Madrone evaluated the site for the presence of, and mapped, potential aquatic resources within the site. In addition, subsequent to preparation of the BRA, an ARD was prepared for the site.

The ARD consisted of a site reconnaissance where data points were mapped in the field with a GPS unit, three-parameter data (vegetation, soils, and hydrology) were collected at each data point, and wetland/waters or upland status were documented, as appropriate. The delineation was performed in accordance with the USACE Wetlands Delineation Manual, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual:

Arid West Region (Version 2.0), A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, and the Sacramento District's Minimum Standards for Acceptance of Preliminary Wetlands Delineations. USACE regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. In addition, the most recent National Wetland Plant List was used to determine the wetland indicator status of plants observed on the site and the Jepson eFlora was used for plant nomenclature.

According to the ARD, the site has been previously used as a staging area for construction of the surrounding development, and when previous construction activities were complete, a number of depressions remained, which have become occupied by wetland plant species. As part of the ARD, four data points were taken in representative depressions, including depressions that appeared to be the deepest and most occupied by hydrophytic species. The ARD concluded that the data points did not contain wetland hydrology indicators or hydric soil indicators, and as such, did not qualify as wetlands or waters of the U.S. As such, the ARD concluded that the site does not contain aquatic resources.

Therefore, implementation of the Project would not result in impacts related to having a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS or related to having 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. Thus, a ***less-than-significant*** impact could occur.

d. The site is located in an urbanized area of the City, and is bound by single-family residences to the north and west. Additional residences border the site to the east across Wyland Drive, and to the south across Wayne Heintz Street. The existing setting of the surrounding area limits the potential for use of the site as a wildlife movement corridor. In addition, the Project would not impede the flow of Elk Grove/Laguna Creek, which could be used by migratory fish or as a wildlife corridor for other wildlife species.

Based on the above, the Project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. Thus, a ***less-than-significant*** impact would occur.

e. Section 19.12 of the City of Elk Grove Municipal Code contains the City's Tree Preservation and Protection Ordinance. The ordinance provides protections for landmark trees, trees of local importance, secured trees, and trees on City property or in a public right-of-way.

The site is currently vacant and has been previously graded, consisting of ruderal grasses that appear to be regularly mowed for weed abatement. The site does not contain trees, thus, the removal of trees which are considered trees of local importance and are protected by the City would not be required.

Based on the above, the Project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and ***no impact*** would occur.

f. Sacramento County, the City of Rancho Cordova, the City of Galt, and other local partners have adopted the South Sacramento Habitat Conservation Plan (SSHCP). However, the City of Elk Grove is not a participating city. Furthermore, as noted above, this IS/MND includes mitigation measures to address potential impacts to species which are covered by the SSHCP, including white-tailed kite, burrowing owl, and Swainson's hawk. The mitigation measures included herein generally do not conflict with the avoidance and minimization measures included in Chapter 5 of the SSHCP. Therefore, the site is not located in an area with an approved HCP/NCCP, or local, regional, or State habitat conservation plan, and ***no impact*** would occur regarding a conflict with the provisions of such a plan.

V. CULTURAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	✖	☐	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries.	☐	✖	☐	☐

Discussion

a-c. Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics. Pursuant to PRC Section 21083.2(g), an unique archaeological resource is defined as an archaeological artifact, object, or site that contains information needed to answer important scientific research questions, has a special or particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person.

In order to determine whether the site contains significant historical resources, a record search of the California Historic Resources Information System (CHRIS) was performed by the North Central Information Center (NCIC) for cultural resource site records and survey reports within the Project area.[10] The CHRIS records search included review of archaeological resource records, historic properties records, official records and maps of archaeological sites and surveys in the City of Elk Grove, the National Register of Historic Places (NRHP), and the California Register of Historical Resources (CRHR). The record search indicated that the site does not contain any recorded archeological or historical resources. In addition, a records search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the Project and returned negative results, indicating that sacred tribal lands are not known to exist on or near the site.[11]

The site has been subject to previous disturbance, including regular disking, before use as a staging area for construction of surrounding residences, and currently, regular mowing for weed abatement. However, the CHRIS records search results indicate that the site is located in a part of Sacramento County that is known as the ethnographic-period territory of the Plains Miwok. Furthermore, the CHRIS records search results state evidence of a nineteenth-century fence in the broader vicinity to the west of the Project area. However, according to the CHRIS results, evidence of twentieth-century historical activity was not identified in aerial photography, and the site has been previously surveyed for indigenous-period, ethnographic-period, and historic-period cultural resources with negative results. Therefore, the CHRIS records search results determined that the site

[10] North Central Information Center. *Records Search Results for Milestone II Subdivision Project*. October 25, 2024.
[11] Native American Heritage Commission. *Milestone II GPA/Rezone, and Map Project, Sacramento County*. April 15, 2024.

has low potential for containing previously unrecorded archeological or historical resources.

In compliance with AB 52 (PRC Section 21080.3.1) and SB 18, on June 3, 2024, the City provided formal notification letters to the following tribes that had requested notification: Buena Vista Rancheria of Me-Wuk Indians; Calaveras Band of Mi-Wuk Indians; California Valley Miwok Tribe; Chicken Ranch Rancheria of Me-Wuk Indians; Ione Band of Miwok Indians; Jackson Rancheria Band of Miwuk Indians; Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Pakan'yani Maidu of Strawberry Valley Rancheria; Shingle Springs Band of Miwok Indians; Tsi-Akim Maidu of the Taylorsville Rancheria; United Auburn Indian Community of the Auburn Rancheria; and Wilton Rancheria. Requests for consultation were not received within the required response period.

Based on the above, while known resources do not exist on-site and the site has been subject to prior disturbance, previously unknown historical or archaeological resources, including human remains, may exist in the Project area. Such resources have the potential to be uncovered during ground-disturbing activities at the site, and the Project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of dedicated cemeteries, during construction. Therefore, without mitigation, impacts could be considered ***potentially significant***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

V-1. *If cultural resources or tribal cultural resources are discovered during grading or construction activities within the site, work shall halt immediately within 50 feet of the discovery, the City of Elk Grove Community Development Department shall be notified, and a professional archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in archaeology shall be retained to determine the significance of the discovery. If resources are determined to be potentially significant, the City shall require the preparation of a treatment plan and report of findings for cultural and tribal cultural resources. The City and the applicant shall consult and agree to implement all measures the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The applicant shall be required to implement measures necessary for the protection and documentation of cultural resources.*

V-2. *Before the start of any earthmoving activities, the Project owner shall retain a qualified scientist (e.g., geologist, biologist, paleontologist) to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. Training on paleontological resources shall also be provided to all other construction workers but may use videotape of the initial training and/or written materials rather than in- person training. If any paleontological resources (fossils) are discovered during grading or construction activities within the Project area,*

work shall be halted immediately within 50 feet of the discovery, and the City of Elk Grove Community Development Department shall be immediately notified. The Project owner will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (SVP 2010). The recovery plan may include but is not limited to a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible will be implemented by the applicant before construction activities resume in the area where the paleontological resources were discovered.

V-3 *Prior to the start of any ground disturbing activities, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists shall be retained to develop a construction worker awareness brochure. This brochure shall be distributed to all construction personnel and supervisors who will have the potential to encounter cultural resources. Proof of compliance shall be submitted to the City of Elk Grove Community Development Department. The topics to be addressed in the Worker Environmental Awareness Program will include, at a minimum:*

- *Types of cultural resources expected in the project area;*
- *What to do if a worker encounters a possible resource;*
- *What to do if a worker encounters bones or possible bones; and*
- *Penalties for removing or intentionally disturbing cultural resources, such as those identified in the Archeological Resources Protection Act.*

V-4. *In the event of the accidental discovery or recognition of any human remains, the City of Elk Grove Community Development Department shall be notified, and further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby area suspected to contain human remains shall occur and the County Coroner shall be notified to determine if an investigation into the cause of death is required. If the coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission, which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. If the Native American Heritage Commission is unable to identify a most likely descendant or most likely descendant fails to make a recommendation within 24 hours after notification by the Native American Heritage Commission, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the Native American Heritage Commission fails to provide a measure acceptable to the landowner, then the landowner or his authorized*

representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the resulting County Coroner report noting any written consultation with the Native American Heritage Commission shall be submitted as proof of compliance to the City of Elk Grove Community Development Department. Work on the site cannot commence until after the human remains are removed from the area or, if reburial is determined to be the appropriate course of action, reburied at a location on the property not subject to further disturbance.

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

Discussion

a,b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2022 California Green Building Standards Code and the Building Energy Efficiency Standards, with which the Project would be required to comply, as well as discussions regarding the Project's potential effects related to energy demand during construction and operations, are provided below.

California Green Building Standards Code

The 2022 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC which became effective with the rest of the CBSC on January 1, 2023.[12] The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of EV charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' MWELO, or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Incentives for installation of electric heat pumps, which use less energy than traditional HVAC systems and water heaters;
- Required solar PV system and battery storage standards for certain buildings; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2022 Building Energy Efficiency Standards is a portion of the CBSC that went into effect on January 1, 2023. The 2022 standards provide for additional efficiency improvements beyond the 2019 standards. The 2022 Building Energy Efficiency Standards expand upon energy efficiency measures from the 2019 Building Energy Efficiency Standards, resulting in a further reduction in energy consumption from the 2019

[12] California Building Standards Commission. *2022 California Green Building Standards Code*. 2023.

standards for residential structures. The 2022 Building Energy Efficiency Standards include requirements that encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards.

Operational Energy Use

Following implementation of the Project, PG&E shall provide natural gas to the site. Electricity shall be provided by SMUD. Energy use associated with operation of the Project would be typical of industrial land uses, requiring electricity and natural gas for interior and exterior building lighting, ventilation, and air conditioning (HVAC), electronic equipment, machinery, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the Project would result in transportation energy use associated with vehicle trips generated by employee commutes and the movement of goods.

The Project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards, including the more stringent Tier 1 standards required per the City's Climate Action Plan (CAP), as discussed in further detail in Section VIII, Greenhouse Gas Emissions, of this IS/MND, ensures that the proposed structures consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Required compliance with the CBSC ensures that the building energy use associated with the Project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the Project by SMUD would comply with both the State's RPS, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 60 percent by 2030, as well as the SMUD's internal RPS goals. For 2027, the first full year that this IS/MND assumes the Project would be fully operational, SMUD's renewable portfolio standard is anticipated to be approximately 60 percent. Thus, a portion of the energy consumed during Project operations would originate from renewable sources.

With regard to transportation energy use, the Project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Section XVII, Transportation, of this IS/MND, the cumulative vehicle miles traveled (VMT) associated with development of the Project and other existing and planned development within the City of Elk Grove would be below the established city-wide VMT threshold.

Compliance with the State's latest Energy Efficiency Standards ensures that the Project would implement all necessary energy efficiency regulations. Additionally, the inclusion of solar panels and other sustainable features, such as water-conserving plumbing fixtures, by the Project would further reduce any impacts associated with energy consumption.

Conclusion

Based on the above, operation of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and a ***less-than-significant*** impact would occur.

VII. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Directly or indirectly cause 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 based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	✖	☐
ii. Strong seismic ground shaking?	☐	☐	✖	☐
iii. Seismic-related ground failure, including liquefaction?	☐	✖	☐	☐
iv. Landslides?	☐	✖	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	✖	☐
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?	☐	✖	☐	☐
d. Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	✖	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	✖
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	✖	☐	☐

Discussion

ai-ii. As noted in the General Plan EIR, Sacramento County is less affected by seismic events and geologic hazards than other portions of the State.[13] The California Geological Survey's (CGS) map of seismic shaking hazards in California shows that most of Sacramento County, including the City of Elk Grove, is located in a relatively low-intensity ground shaking zone. The nearest mapped fault is the Foothills Fault System, located approximately 21 miles east of the City. The City does not contain any active or potentially active faults, and is not located within an Alquist-Priolo Earthquake Fault Zone[14]. Thus, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development would be low. The Geotechnical Investigation prepared for the Project by Geocon consultants, Inc. (Geocon) (see Appendix F)[15] also analyzed regional active faults and historical earthquakes in the Project area. Geocon's findings on seismicity in the Project area were consistent with the findings of the General Plan EIR.

Due to the site's proximity to the nearest active faults, the potential exists for the proposed buildings to be subject to seismic ground shaking. However, the proposed buildings would be properly engineered in accordance with the CBSC, which includes engineering

[13] City of Elk Grove. *General Plan Update Environmental Impact Report* [pg. 5.6-1]. February 2019.

[14] Department of Conservation. *California Geological Survey Earthquake Zones of Required Investigation.* Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/. Accessed February. 2025.

[15] Geocon Consultants, Inc. *Geotechnical Investigation Milestone II Residential Subdivision Elk Grove, California.* May, 2024.

standards appropriate for the seismic area in which the site is located. The most recent edition of the CBSC is adopted as Section 16.04.010 of the Elk Grove Municipal Code. Conformance with the design standards is enforced through building plan review and approval by the City of Elk Grove Building Division prior to the issuance of building permits. Proper engineering of the Project ensures that seismic-related effects would not cause adverse impacts. Based on the above, a ***less-than-significant*** impact would occur related to seismic surface rupture and strong seismic ground shaking.

aiii,aiv, c,d. The Project's potential effects related to liquefaction, landslides, lateral spreading, subsidence and expansive soils are discussed in detail below. The analysis below is based on the Geotechnical Investigation prepared for the Project by Geocon. The Geotechnical Investigation included review of geotechnical literature and available conceptual layouts, a site visit in April 2023, the advancement of seven test borings, excavation of disturbed and relatively undisturbed soil samples, and drilling of two additional borings within the proposed LID stormwater facility area to conduct two field infiltration tests. The seven initial borings were logged in accordance with the Unified Soil Classification System (USCS) and Laboratory testing was conducted of all collected samples.

Liquefaction

Liquefaction is a phenomenon in which loose, saturated, cohesionless soil deposits located beneath the groundwater table lose strength when subjected to intense and prolonged ground shaking. The seismic excitation increases pore water pressure creating a buoyant effect of the loose soil. When liquefaction occurs, building foundations may sink or tilt and differential ground settlement may occur. As noted in the General Plan EIR, the soils underlying the City's Planning Area are relatively dense/stiff, and the upper 50 feet of soil are above the depth of groundwater; therefore, the potential for liquefaction within the City is considered low.[16] In addition, due to the subsurface conditions encountered at the site, including a lack of groundwater in the top 50 feet, Geocon determined that liquefaction is not a hazard for the site. Project-specific design features or Mitigation Measures related to liquefaction hazards would not be required.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The site does not contain, and is not adjacent to, any steep or unstable slopes. According to the Geotechnical Investigation the site is relatively flat and ground surface elevations range from 49 to 51 feet amsl. Thus, landslides are unlikely to occur on- or off-site as a result of the Project.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The site does not contain open faces within a distance that would be considered susceptible to lateral spreading. Therefore, the potential for lateral spreading to affect the site is low.

[16] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.6-3]. February 2019.

Subsidence and Expansive Soils

When subsurface earth materials move, the movement can cause the gradual settling or sudden sinking of ground. The phenomenon of settling or sinking ground is referred to as subsidence, or settlement. Expansive soils are soils which undergo significant volume change with changes in moisture content. Specifically, such soils shrink and harden when dried and expand and soften when wetted, potentially resulting in damage to building foundations.

Based on the laboratory analysis of the soil samples taken from the site, Geocon found moderate plasticity and corresponding medium expansion potential in on-site soils. As noted above, the City of Elk Grove has adopted the most recent edition of the CBSC in Section 16.04.010 of the Elk Grove Municipal Code. As discussed in the General Plan EIR, the CBSC's accepted engineering practices require special design and construction methods for dealing with expansive soils. The two most common methods to prevent damage from expansive soils are to design the building's foundation to resist soil movement and to control surface drainage in order to reduce seasonal fluctuations in soil moisture. Consistent with the CBSC, the Geotechnical Investigation prepared for the Project identifies appropriate construction and structural design methods to reduce the potential for damage from unstable soil conditions, including subsidence and expansive soils. Given compliance with the recommendations of the Geotechnical Investigation, associated risks to the proposed development would not occur.

Conclusion

Based on the above discussion, the Project is not anticipated to result in potential hazards or risks related to liquefaction, landslides, or lateral spreading. However, potential risks could occur related to subsidence and being located on expansive soil. As such, while the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction or landslides, the potential exists for the Project to 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 subsidence or collapse. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

VII-1. *Prior to issuance of grading permits, the Project Civil Engineer shall show on the Project plans that the Project design adheres to all engineering recommendations provided in the site-specific Geotechnical Investigation prepared for the Project by Geocon Consulting, Inc. Proof of compliance with all recommendations specified in the Geotechnical Engineering Study shall be subject to review and approval by the City Engineer.*

b. During grading activities associated with development of the Project, and prior to overlaying of the ground with impervious surfaces and landscaping elements, topsoil would temporarily be exposed. Thus, the potential exists for wind and water to erode portions of the exposed topsoil during construction, which could adversely affect downstream storm drainage facilities. However, as noted in the General Plan EIR, Chapter 16.44, Land Grading and Erosion Control, of the Elk Grove Municipal Code establishes administrative procedures, minimum standards of review, and implementation and

enforcement procedures for controlling erosion caused by land clearing, grubbing, grading, filling, and land excavation activities. Section 16.44.050 includes the following requirement:

> Except as provided by EGMC Section 16.44.060, 16.44.065 or 16.44.070, a grading and erosion control permit shall be required to: A) grade, fill, excavate, store or dispose of three hundred fifty (350 yd^3) cubic yards or more of soil or earthy material, or B) clear and grub one (1) acre or greater of land within the City. A separate permit is required for work on each site unless sites are contiguous, have the same ownership, and are included in the approved plan. Any determination by the Director as to whether a permit is required may be appealed pursuant to the provisions of EGMC Section 16.44.300.

Furthermore, per Section 16.44.090, plans submitted to the City must include the location, implementation schedule, and maintenance schedule of all erosion control measures and sediment control measures to be implemented or constructed prior to, during or after the proposed activity, along with a description of measures designed to control dust and stabilize the construction site road and entrance. Pursuant to Section 16.44.150, grading and erosion control permit applications and improvement plans may only be issued or approved by the City if the Public Works Director finds that the Project would not adversely affect surrounding properties and public rights-of-way, the water quality of watercourses, or existing drainage.

Based on the above, the Project would be required to comply with all applicable standards established in Chapter 16.44, including issuance of a grading and erosion control permit as required by Section 16.44.050. Given compliance with Chapter 16.44 and other applicable City regulations related to erosion control, the Project would result in a ***less-than-significant*** impact related to substantial soil erosion or loss of topsoil during construction.

e. The Project would connect to the existing SacSewer sanitary sewer lines located in the Project vicinity. The construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the Project. Therefore, ***no impact*** regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems would occur.

f. As noted in the General Plan EIR, impacts to paleontological resources can occur when excavation activities encounter fossiliferous geological deposits and cause physical destruction of fossil remains. The potential for impacts on fossils depends on the sensitivity of the geologic unit and the amount and depth of grading and excavation. Much of the City's Planning Area is considered highly sensitive for paleontological resources.[17]

Based on the above, ground-disturbing activities associated with the Project could potentially result in the uncovering of paleontological resources. However, implementation of Mitigation Measure VII-2, which requires implementation of Mitigation Measure V-2, as defined in Section V, Cultural Resources, of this IS/MND, would ensure that the Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Thus, without mitigation, a ***potentially significant*** impact could occur.

[17] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.6-12]. February 2019.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

VII-2. Implement Mitigation Measure V-2.

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

Discussion

a,b. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHGs are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to the project would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

Regulatory Context

In September 2006, AB 32 was enacted, which requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 delegated the authority for implementation to the CARB and directs the CARB to enforce the statewide cap. In accordance with AB 32, CARB prepared the Climate Change Scoping Plan (Scoping Plan) for California, which was approved in 2008 and subsequently revised in 2014 and 2017. The 2017 revision to the Scoping Plan updated the plan in compliance with SB 32. SB 32 codified emissions reduction targets for the year 2030, which had previously been established by Executive Order B-30-15.

Pursuant to SMAQMD and Section 15183.5 of the CEQA Guidelines, a project may satisfy applicable GHG analysis requirements under CEQA by demonstrating compliance with a qualified CAP.[18] Specifically, Section 15183.5 states the following:

> Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce greenhouse gas emissions. Later Project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse

[18] Sacramento Metropolitan Air Quality Management District. *Climate Action Planning in the Sacramento Metropolitan Air Quality Management District*. November 2017.

> gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).

On February 27, 2019, the City of Elk Grove adopted an updated CAP that includes City-wide goals and strategies for the reduction of GHG emissions. In order to meet the City's GHG emissions targets, the CAP sets forth a number of GHG emission reduction implementation measures. Individual projects that are consistent with the implementation measures of the CAP would be considered to meet the City's emissions targets and, thereby, would not conflict with implementation of the CAP or the statewide emission reduction targets of AB 32 or SB 32.

Elk Grove CAP

The Elk Grove CAP is considered a qualified plan for determining consistency with AB 32 and SB 32 and, thus, determining the significance of project-related GHG emissions. The General Plan EIR concluded that, with implementation of the CAP, buildout of the City's Planning Area would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs, and a less-than-significant impact would occur. As such, projects that are consistent with the CAP and implement all applicable CAP measures would result in less-than-significant impacts related to GHG emissions.

Section B, General Plan Land Use Consistency, of the City of Elk Grove Climate Action Plan Consistency Review Checklist (see Appendix G), requires an analysis be conducted if a project would include a GPA and/or Rezone to compare the proposed land use and/or zoning designations to the existing designation, and determine whether the proposed designations would result in an equivalent or less GHG-intensive project when compared to the existing designations. If the GHG emissions of the Project remain equivalent or below the existing designation, further analysis is not required beyond the typical assessment of the Project's consistency with the reduction measures presented in Section C of the Checklist.

Because the Project would include a GPA and a Rezone, a GHG Emissions Memorandum was prepared for the Project by ECORP Consulting Inc (see Appendix A)[19], which includes a comparison of the Project's construction-related and operational GHG emissions, as compared to the GHG emissions anticipated to occur with the existing General Plan and zoning designations associated with the site. Further discussion is provided below.

Construction Greenhouse Gas Emissions

Construction GHG emissions were modeled by ECORP using CalEEMod. The Existing Land Use Designation was anticipated to result in the construction of a 778-student elementary school, while the Project Land Use Designation is anticipated to result in development of a 56-unit single-family residential subdivision. The construction-related GHG emissions associated with the existing and proposed land use designations are presented in Table 5, below.

[19] ECORP Consulting, Inc. *Milestone II Residential Project – Greenhouse Gas Emissions Memorandum.* November 2024.

Table 5 **Construction-Generated Greenhouse Gas Emissions**	
Emission Source	**CO2e (Metric Tons/Year)**
Existing Land Use Designation (778-Student Elementary School)	
Construction Calander Year One	**330**
Construction Calander Year Two	**215**
Total	**545**
Project Land Use Designation (56 Single Family Residential Units)	
Construction Calander Year One	**315**
Construction Calander Year Two	**201**
Total	**516**
Difference (Existing Land Use Designation - Project Land Use Designation)	
Construction Calander Year One	**-15**
Construction Calander Year Two	**-14**
Source: CalEEMod version 2022.1. (see Appendix A).	

As shown in Table 5, the Project would result in a reduction in construction-related GHG emissions as compared to the existing land use designation.

As discussed above, because the Project's construction-related GHG emissions were determined to be below the existing designation, further analysis is not required beyond the typical assessment of the Project's consistency with the reduction measures presented in Section C of the CAP Consistency Checklist, which is discussed in further detail below.

Operational Greenhouse Gas Emissions

Operational GHG emissions were modeled by ECORP using CalEEMod, under the same assumptions as presented for construction GHG emission above. The operational GHG emissions associated with the existing and proposed land use designations are presented in Table 6, below.

Table 6 **Operational-Related Greenhouse Gas Emissions**	
Emission Source	**CO2e (Metric Tons/Year)**
Existing Land Use Designation (778-Student Elementary School)	
Mobile Source Emissions	**1,522**
Area Source Emissions	**1**
Energy Source Emissions	**138**
Water Emissions	**2**
Solid Waste Emissions	**44**
Refrigeration Emissions	**0**
Total	**1,707**
Project Land Use Designation (56 Single Family Residential Units)	
Mobile Source Emissions	**863**
Area Source Emissions	**1**
Energy Source Emissions	**178**
Water Emissions	**4**
Solid Waste Emissions	**12**
Refrigeration Emissions	**0**
Total	**1,058**

Difference (Existing Land Use Designation - Project Land Use Designation)	
Mobile Source Emissions	**-659**
Area Source Emissions	**0**
Energy Source Emissions	**+40**
Water Emissions	**+2**
Solid Waste Emissions	**-32**
Refrigeration Emissions	**0**
Difference	**-649**
Source: CalEEMod version 2022.1. (see Appendix A).	

As shown in Table 6, the Project would result in a reduction in operational GHG emissions as compared to the existing land use designation.

As discussed above, because the Project's operational GHG emissions were determined to be below the existing designation, further analysis is not required beyond the typical assessment of the Project's consistency with the reduction measures presented in Section C of the CAP Consistency Checklist, which is discussed in further detail below.

Reduction Measure Consistency

Table 7, below, presents a consistency discussion for each of the CAP measures that are required for analysis in CEQA documents.

Table 7
Elk Grove CAP Consistency Review Checklist Summary

CAP Implementation Measure	Project Consistency
BE-4. Building Stock: Encourage or Require Green Building Practices in New Construction Encourage new construction Projects to comply with CALGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24 Part 6 Building Energy Efficiency Standards.	The Project applicant has committed to comply with CALGreen Tier 1 standards.
BE-5. Decrease Energy Emissions in New Construction Decrease energy emissions beginning in 2025 for new residential construction. Phase in Zero Net Energy (ZNE) standards by 2030 for new commercial projects.	The Project has committed to achieving a 15 percent reduction in natural gas usage as compared to the 2022 Title 24 Standards. Thus, the Project complies with this measure.
BE-6. Building Stock: Electrification in New and Existing Residential Development Encourage and incentivize new residential developments to include all-electrical appliances and HVAC systems in the design of new Projects. Support local utilities in implementing residential retrofit programs to help homeowners convert to all electrical appliances and HVAC systems. Explore the feasibility of phasing in minimum standards for all-electric developments.	The Project applicant has committed to requiring at least 10 percent of the proposed units to include exclusively electrical appliances and HVAC system. Thus, the Project complies with this measure.

Table 7
Elk Grove CAP Consistency Review Checklist Summary

CAP Implementation Measure	Project Consistency
BE-7. Building Stock: Solar Photovoltaics in New and Existing Residential and Commercial Development Encourage and require installation of on-site solar photovoltaic (PV) in new single-family and low-rise multi-family developments. Promote installation of on-site PV systems in existing residential and commercial development.	The 2022 CBSC requires that new residential structures be built with rooftop solar. The Project would be required to include rooftop solar PV panels and, therefore, the Project complies with this measure.
TACM-2. Transit-Oriented Development Support higher-density, compact development along transit by placing high-density, mixed-use sites near transit opportunities.	The Project includes construction of low-density residential uses. However, existing bus stops located along both sides of Elk Grove Boulevard and Bradshaw Road in the Project vicinity would provide future residents of the Project with reasonably convenient access to transit. Overall, the Project generally complies with the intent of this measure.
TACM-4. Pedestrian and Bicycle Travel Provide for safe and convenient pedestrian and bicycle travel through implementation of the Bicycle, Pedestrian, and Trails Master Plan and increased bicycle parking standards.	In 2021, the City adopted the Bicycle, Pedestrian, and Trails Master Plan. As noted therein, a Class III bike lane exists 0.23-miles north of the Project site in both directions along Mainline Drive and connects to the citywide bicycle network. A Grade-Separated Class I Bikeway Crossing is proposed approximately 0.25-miles south of the Project site near the Saini walking and bicycling trail. Planned bike trails are not identified within the Project site and, therefore, implementation of the Project would not impede the development of any bicycle facilities that are planned for development in the Bicycle, Pedestrian, and Trails Master Plan. Additionally, the proposed internal roadway, A Street, would connect to the sidewalks on Wyland Drive and sidewalks would be included on both sides of the internal roadway. As such, the Project would improve the pedestrian and bicycle connectivity in the area. Thus, the existing and proposed pedestrian and bicycle facilities are anticipated to have substantial capacity to accommodate any pedestrian and bicycle traffic generated from implementation of the Project. Such improvements would improve the connectivity of the site to the surroundings. As such, the Project complies with this measure.
TACM-6. Limit Vehicle Miles Traveled Achieve a 15 percent reduction in daily VMT compared to existing conditions (2015) for all new development in the City, consistent with state-mandated VMT reduction targets for land use and transportation projects.	As discussed further in Section XVII, Transportation, of this IS/MND, the Project would achieve a greater than 15 percent reduction in VMT per service population compared to the applicable threshold. As such, the Project complies with this measure.

Table 7
Elk Grove CAP Consistency Review Checklist Summary

CAP Implementation Measure	Project Consistency
TACM-8. Tier 4 Final Construction Equipment Require all construction equipment used in Elk Grove to achieve EPA-rated Tier 4 Final diesel engine standards by 2030 and encourage the use of electrified equipment where feasible.	The Project applicant has committed to requiring that at least 25 percent of off-road construction equipment used during Project construction be EPA-rated Tier 4 Final. Therefore, the Project complies with this measure.
TACM-9. EV Charging Requirements Adopt an electric vehicle (EV) charging station ordinance that establishes minimum EV charging standards for all new residential and commercial development. Increase the number of EV charging stations at municipal facilities throughout the City.	Consistent with this measure, the City of Elk Grove adopted Section 23.58.120 of its Code related to electric vehicle charging. Pursuant to 23.58.120(C), a minimum of one (1) "EV ready" space shall be provided for each single-family dwelling unit to allow for the future installation of electric vehicle supply equipment. The Project will comply with this measure by providing one (1) EV ready space per unit.
Source: City of Elk Grove. Climate Action Plan: 2019 Update. Adopted December 2019; Amended December 2022, December 2024.	

As shown above, the Project would comply with all applicable measures presented within the CAP.

Conclusion

As noted previously, the City's CAP was established to ensure the City's compliance with the statewide GHG reduction goals required by AB 32 and SB 32. As demonstrated in the table above, the Project would be generally consistent with all applicable measures within the City's CAP. As such, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Nonetheless, without mitigation to ensure that the proposed project would be consistent with all applicable measures of the City's CAP, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

VIII-1. *Prior to issuance of any grading or building permits, Project Grading and Building Plans shall demonstrate compliance with the following applicable measures included in the City's Climate Action Plan, to the satisfaction of the City of Elk Grove Community Development Department:*

- *BE-4: The Project shall comply with 2019 CALGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24, Part 6, Building Energy Efficiency Standards.*
- *BE-5: The Project shall achieve a 15 percent reduction in natural gas usage as compared to the 2022 Title 24 Standards.*

- *BE-6: The Project shall require at least 10 percent of the proposed residential units to include exclusively electric appliances and HVAC systems.*
- *BE-7: The Project shall include rooftop solar PV panels.*
- *TACM-8: A minimum of 25 percent of the off-road construction fleet used during construction of the Project shall include Environmental Protection Agency certified off-road Tier 4 diesel engines (or better).*
- *TACM-9: The Project shall provide one EV ready space per residential unit.*

IX. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	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?	☐	☐	✖	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	✖	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	✖
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?	☐	☐	☐	✖
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	✖
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	✖	☐
g. Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	☐	☐	☐	✖

Discussion

a. Operations associated with the Project would be typical of other residential land uses in the City, and would be governed by the uses permitted for the site by the Elk Grove Municipal Code and General Plan.

A significant hazard to the public or the environment could result from the routine transport, use, or disposal of hazardous materials. Future operations on the site could involve the use of common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount that could reasonably be used on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. The following discussion provides an analysis of potential hazards and hazardous materials associated with upset or accident conditions related to the proposed construction activities and existing on-site conditions.

Construction Activities

Construction activities associated with the Project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g.,

petroleum and other chemicals used to operate and maintain construction equipment) would be used at the project site and transported to and from the site during construction. However, the Project contractor would be required to comply with all California Health and Safety Codes regulating the handling, storage, and transportation of hazardous and toxic materials. Pursuant to California Health and Safety Code Section 25510(a), except as provided in subdivision (b),[20] the handler or an employee, authorized representative, agent, or designee of a handler, shall, upon discovery, immediately report any release or threatened release of a hazardous material to the unified program agency (in the case of the Project, the Sacramento County Department of Health Services) in accordance with the regulations adopted pursuant to this section. The handler or an employee, authorized representative, agent, or designee of the handler shall provide all State, city, or county fire or public health or safety personnel and emergency response personnel with access to the handler's facilities. In the case of this Project, the contractor is required to notify the Sacramento County Department of Health Services in the event of an accidental release of a hazardous material, who would then monitor the conditions and recommend appropriate remediation measures.

Site Conditions

A development project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment should a site contain potential Recognized Environmental Conditions (RECs) that are not properly addressed prior to Project implementation. A REC indicates the presence or likely presence of any hazardous substances in, on, or at a property due to any release into 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.

A Phase I Environmental Site Assessment (ESA) was prepared for the Project by Wallace Kuhl & Associates (WKA) (see Appendix H)[21], which included a review of databases, historical materials, and a site reconnaissance on June 28, 2022, to observe existing conditions on-site and on adjacent properties. WKA also conducted a preliminary screening for vapor encroachment beneath the site using the Tier 1 vapor encroachment condition (VEC) screening evaluation1 pursuant to the American Society for Testing and Materials (ASTM) E2600-15, as well as a review of the completed ASTM.

According to the Phase I ESA, the site was historically used for cattle grazing and is currently vacant. Historical aerial photographs of the site and general vicinity also show historic use of the site for dry farm crop cultivation prior to the use of the site for grazing.

A small pile of debris was observed on the northeastern portion of the site during the site reconnaissance conducted by WKA. According to the Phase I ESA, the pile of debris consisted of vegetative material and wood pieces. WKA recommended that the debris pile observed on the northeastern portion of the site should be properly disposed of. Proper disposal of the vegetative material and wood pieces observed on-site would occur as part of site preparation activities.

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[20] Subdivision (a) does not apply to a person engaged in the transportation of a hazardous material on a highway that is subject to, and in compliance with, the requirements of Sections 2453 and 23112.5 of the Vehicle Code.

[21] Wallace Kuhl & Associates. *Phase I Environmental Site Assessment: Milestone II Property Wyland Drive Elk Grove, California Project No. 4640.2200088.0000*. July 8, 2022.

Overall, the Phase I ESA did not identify evidence of RECs or VEC in connection with the site or the adjacent properties. However, the Phase I ESA did identify historic wells and irrigation infrastructure on-site, which are discussed in further detail below.

Historical Wells and Irrigation

During the site reconnaissance conducted as part of the Phase I ESA, WKA observed an inactive well and concrete stand-pipe on the northeastern portion of the site. WKA recommended that the inactive well located on the northeastern portion of the site be properly abandoned in accordance with local, State, and federal regulations. In addition, WKA determined that the observed concrete standpipe is evidence that an underground irrigation water distribution system may exist within the site. The Phase I ESA recommended that the distribution system should be dismantled and collected for disposal. The Phase I ESA also noted that if the system is constructed of asbestos-containing concrete pipe, the asbestos containing material shall be collected and properly disposed. Thus, without proper abandonment and disposal of the inactive well and concrete stand-pipe, the Project would result in a significant hazard to the public or the environment.

Conclusion

Based on the above, potentially hazardous conditions could occur if the inactive well, concrete stand-pipe, and debris pile are not correctly disposed of, especially if asbestos or asbestos-containing materials are present within the potential underground irrigation water distribution system existing throughout the site. Therefore, without mitigation, the Project could create a significant hazard to the public or the environment, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

IX-1. *Prior to improvement plan approval, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from the Sacramento County Environmental Health Division for the on-site well and irrigation infrastructure. The well shall be properly abandoned in accordance with Department of Water Resources Bulletin 74-81 (Water Well Standards, Part III), subject to review and approval by the Sacramento County Environmental Health Division and the City of Elk Grove. Care shall be exercised in determining whether or not the subsurface structures contain asbestos. If asbestos is detected, the subsurface structures shall be removed, handled, transported, and disposed of in accordance with local, State, and federal laws and regulations. Proof of completion of such activities shall be submitted to the City's Community Development Department.*

c. The nearest school to the site, California Montessori Project, Elk Grove Campus, is located approximately 4,503 feet (0.85-mile) northeast of the site. In addition, as discussed above, hazardous materials would not be emitted during construction or operation of the Project. Therefore, the Project would result in ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. According to the Department of Toxic Substances Control's Hazardous Waste and Substances Site List, the site is not located on a site that is currently included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[22] Additionally, the Phase I ESA prepared for the Project conducted a search of Federal, State, local, and environmental records including Cortese, and the site was not identified on any applicable database. As such, the Project would not create a significant hazard to the public or the environment associated with such, and ***no impact*** would occur.

e. The nearest airport to the site is the Sky Way Estates Airport-CL04, located approximately 5.8 miles northeast of the site. As such, the site is not located within two miles of any public airports or private airstrips, and does not fall within an airport land use plan area. Therefore, ***no impact*** related to a safety hazard for people residing or working in the Project area related to such would occur.

f. As noted in the City's General Plan EIR, Elk Grove participates in the multi-jurisdictional Sacramento County Local Hazard Mitigation Plan (LHMP), last updated in 2021.[23] The purpose of the LHMP is to guide hazard mitigation planning to better protect the people and property of the County from the effects of hazard events. The Sacramento LHMP includes policies and programs for participating jurisdictions to implement that reduce the risk of hazards and protect public health, safety, and welfare. In addition to participating in the County's LHMP, the City of Elk Grove maintains an Emergency Operations Plan (EOP) that provides a strategy for the City to coordinate and conduct emergency response. The intent of the EOP is to provide direction on how to respond to an emergency from the initial onset, through an extended response, and into the recovery process.

   Although the Project includes alterations to Wyland Drive and Wayne Heintz Street, such improvements would not physically interfere with the LHMP or the EOP, particularly with identified emergency routes. Development of the site with urban uses and associated effects on emergency evacuation has been anticipated by the City and analyzed in the General Plan EIR. The General Plan EIR concluded that buildout of the City, including the site, would result in a less-than-significant impact related to conflicting with evacuation routes in the event of an emergency. Thus, the Project would not physically interfere with the LHMP or the EOP, particularly with identified emergency routes. Therefore, the Project would not interfere with an emergency evacuation or response plan, and a ***less-than-significant*** impact would occur.

g. According to the City of Elk Grove General Plan EIR, the City does not contain any areas that are designated as moderate, high, or very high Fire Hazard Severity Zones.[24] In addition, the site is surrounded by existing development and is located within an urban area within the City. Thus, the potential for wildland fires to reach the site would be relatively limited. Furthermore, all new development within the site would be required, pursuant to the California Fire Code, to incorporate ignition resistant construction standards and design features to resist the intrusion of flame or embers projected by a vegetation fire (wildfire exposure).

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22 Department of Toxic Substances Control. *Hazardous Waste and Substances Site List*. Available at: https://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES. Accessed February 2025.

23 Sacramento County. *Sacramento County Multi-jurisdictional Local Hazard Mitigation Plan Update*. September 2021.

24 City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.11-1]. February 2019.

Based on the above, the Project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and ***no impact*** would occur.

X. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	✖	☐	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	✖	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	✖	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	✖	☐
iii. 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; or	☐	☐	✖	☐
iv. Impede or redirect flood flows?	☐	☐	✖	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	✖
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	✖	☐

Discussion

a. The following discussion provides a summary of the Project's potential to violate water quality standards/waste discharge requirements or otherwise degrade water quality during construction and operation.

Construction

During the early stages of Project construction activities, topsoil would be exposed due to grading, trenching for utilities, and other standard ground-disturbing activities. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream.

The California State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires that subject projects must file a Notice of Intent with the SWRCB and develop a site-specific Storm Water Pollution Prevention Plan (SWPPP). A SWPPP describes BMPs to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution

impacts of the development Project. BMPs include, but are not limited to, tracking controls, perimeter sediment controls, drain inlet protection, wind erosion/dust controls, and waste management control. Because the Project disturbs greater than one acre of land, the Project would be subject to the requirements of the State's General Construction Permit.

Operation

Residential areas in the City do not typically involve operations associated with the generation or discharge of polluted water. Thus, Project operations would be unlikely to violate any water quality standards or waste discharge requirements, nor degrade water quality. However, the addition of the impervious surfaces on the site would result in the generation of urban runoff, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides.

The NPDES discharge requirements address waste discharge, such as stormwater, from municipal separate storm sewer systems (MS4s).[25] The City jointly participates as an MS4 permittee, together with Citrus Heights, Folsom, Galt, Rancho Cordova, Sacramento, and the County of Sacramento. The current region-wide permit (Order No. R5- 2016-0040) adopted by the Central Valley RWQCB in June 2016 allows each permittee to discharge urban runoff from MS4s in its respective municipal jurisdiction, and requires Phase I MS4 permittees to enroll under the region-wide permit as their current individual permits expire. Regional MS4 permit activities are managed jointly by the Sacramento Stormwater Quality Partnership, which consists of the seven jurisdictions covered by the permit. Under the permit, each permittee is also responsible for ensuring that stormwater quality management plans are developed and implemented that meet the discharge requirements of the permit. Under the 2016 permit, measures should be included in the stormwater quality management plans that demonstrate how new development incorporates LID design in projects. The City's Department of Public Works is responsible for ensuring its specific MS4 permit (Order No. R5-2016-0040-005) requirements are implemented.

According to the Storm Water Quality Evaluation prepared for the Project by MacKay & Somps (see Appendix I),[26] the Project achieves LID compliance through several proposed LID measures including disconnected roof drains, disconnected pavement, interceptor trees, compost-amended soils, and bioretention.

As shown in Figure 7, stormwater generated by impervious surfaces within the site would be captured by a series of curb inlets and manholes and conveyed by way of a system of new 15-, 18-, 24-, 30-, and 42-inch underground storm drains that would direct flows to the proposed Lot A LID stormwater facility in the southwest corner of the site. An existing 12-inch storm drain line is located in the southern boundary of the LID facility and would allow stormwater collected in the LID stormwater facility to be conveyed to the existing City stormwater system within Wayne Heintz Street.

Based on the above, the Project would not include land uses typically associated with the generation or discharge of polluted water, and would be designed to adequately treat stormwater runoff from the site prior to discharge. However, a SWPPP has not yet been prepared for the Project. Without preparation of a SWPPP, proper implementation of BMPs cannot be ensured at this time, and the Project's construction activities could result

[25] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.9-22]. February 2019.
[26] MacKay & Somps. *Storm Water Quality Evaluation for Milestone II Small Lot Vesting Tentative Map*. March 6, 2024.

in an increase in erosion, and consequently affect water quality. Therefore, a ***potentially significant*** impact related to water quality and waste discharge requirements could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

X-1. *Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the SWRCB. The developer shall file the Notice of Intent (NOI) and associated fee to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. Construction (temporary) BMPs for the Project may include, but are not limited to: fiber rolls, straw bale barrier, straw wattles, storm drain inlet protection, velocity dissipation devices, silt fences, wind erosion control, stabilized construction entrance, hydroseeding, revegetation techniques, and dust control measures. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.*

b,e. Water for the site would be supplied by the SCWA. The SCWA pumps groundwater from the South American Sub-basin, as defined by the California Department of Water Resources (DWR) Bulletin 118. The Sacramento Central Groundwater Authority (SCGA) manages groundwater in the Central Basin portion of the South American Subbasin within which the site is located. Currently, SCGA is undergoing discussions with other groundwater basin users of the South American Subbasin to evaluate options for formation of a Groundwater Sustainability Agency and development of a Groundwater Sustainability Plan (GSP), consistent with the requirements of the Sustainable Groundwater Management Act (SGMA). However, DWR has not approved a GSP for the Subbasin at this time.

Given that the site represents a relatively small area compared to the size of the groundwater basin, the site does not currently represent a substantial source of groundwater recharge. In addition, the proposed landscaped areas within the site would continue to allow stormwater runoff to percolate into underlying soils, thereby contributing to groundwater recharge. Although the Project requires a GPA to amend the site's current General Plan land use designation from PS to LDR, the site has been previously designated for urban development and the loss of groundwater infiltration at the site due to development has been previously anticipated in the General Plan EIR. Furthermore, as discussed further in Section XIX, Utilities and Service Systems, of this IS/MND, adequate water supply would be available to serve the Project.

Overall, the Project would result in a ***less-than-significant*** impact with respect to substantially decreasing groundwater supplies or interfering substantially with groundwater recharge such that the Project would impede sustainable groundwater management of the basin.

ci-iii. Chapter 16.44, Land Grading and Erosion Control, of the Elk Grove Municipal Code requires projects that would increase drainage flows and have the potential to exceed the capacity of existing drainage facilities to identify, on Project plans, the improvements needed to accommodate the increased flows. As noted previously, the Project would comply with the performance standards set forth in the regional NPDES MS4 permit related to the implementation of LID measures. Consistent with Chapter 16.44 of the Elk Grove Municipal Code, the Project would be required to include appropriate site design measures and source controls to limit the rate and amount of stormwater runoff leaving the site.

Stormwater on-site would be captured by a series of curb inlets and manholes and conveyed by way of a system of new 15-, 18-, 24-, 30-, and 42-inch underground storm drains that would direct flows to the proposed Lot A LID stormwater facility in the southwest corner of the site. An existing 12-inch storm drain line is located in the southern boundary of the LID facility and would allow stormwater collected in the LID stormwater facility to be conveyed to the existing City stormwater system within Wayne Heintz Street. According to the Storm Water Quality Evaluation, the LID measures incorporated into the Project include disconnected roof drains, disconnected pavement, interceptor trees, compost-amended soils, and the Lot A LID facility, which would reduce stormwater runoff volumes for the 85th percentile event and would reduce the amount of pollutants entering receiving waters. Thus, stormwater runoff from the Project site would be adequately captured and treated on-site in accordance with the City's stormwater standards.

In conclusion, the Project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in erosion, siltation, or flooding on- or off-site, 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. Consequently, implementation of the Project would result in a ***less-than-significant*** impact.

civ. Pursuant to the General Plan EIR, in the event of dam failure, Folsom Dam and Sly Park Dam have the potential to cause flooding in the Planning Area. However, the site is located outside of both the Sly Park Dam and Folsom Dam inundation zones.[27] In addition, in 2017, the USACE completed improvements to the Folsom Dam spillway on the American River to help reduce downstream flood risk.

According to the Federal Emergency Management Agency (FEMA) floodplain map 06067C0338H, the site is located within an Area of Minimal Flood Hazard (Zone X), which is not identified as a Special Flood Hazard Area.[28] Thus, the Project would not include development within a Special Flood Hazard Area and would not be subject to Project-specific design features related to flood hazards. Therefore, development of the Project would not impede or redirect flood flows, and a ***less-than-significant*** impact would result.

d. Impacts related to development within a flood hazard zone are discussed under Question 'civ', above. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body

[27] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [Figure 5.9-5]. February 2019.

[28] Federal Emergency Management Agency. *Flood Insurance Rate Map 06067C0338H*. Available at: https://msc.fema.gov/portal/search?AddressQuery=9119%20Willowberry%20Way%2C%20Elk%20Grove%2C%20CA%2095758#searchresultsanchor. Accessed January 2025.

of water such as a lake or reservoir. The site is not located within the vicinity of an ocean or a large closed body of water. Thus, the Project would not be exposed to flooding risks associated with tsunamis or seiches. Therefore, ***no impact*** would occur with development of the Project.

XI. LAND USE AND PLANNING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	✖	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	✖	☐

Discussion

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. The site does not contain existing housing or other development. In addition, the Project would be compatible with the existing residential uses to the west, north, east, and south of the site. The Project would not alter the existing general development trends in the area or isolate an existing land use. Therefore, the Project would not physically divide an established community and a ***less-than-significant*** impact would occur.

b. The City's General Plan designates the site as PS. The Project requires the approval of a GPA to designate the site as LDR. The site was originally planned for a development of an elementary school within the EGUSD. However, the school district has since determined a school site is no longer needed. Although the Project introduces new uses which are previously unanticipated by the City, the proposed development would be consistent with residential uses to the west, north, east, and south of the site. As shown throughout this IS/MND, the addition of residential uses to the site would not result in any significant environmental effects that cannot be mitigated to a less-than-significant level by the mitigation measures provided herein. In addition, the Project would be generally consistent with the policies in the City's General Plan and Municipal Code adopted for the purpose of avoiding or mitigating an environmental effect. If the requested entitlements are approved, the Project's impacts related to compliance with the Elk Grove General Plan would be less than significant.

In addition, the Project would not conflict with City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect, including, but not limited to, the City's noise standards, and applicable SWRCB regulations related to stormwater. Upon approval of the GPA, the Project would be consistent with all applicable regulations. The decision-makers, in evaluating the Project, would be responsible for making the determination of whether the proposed GPA is approved.

Based on the above, the Project would not cause a significant environmental impact in excess of what has already been analyzed and anticipated in the General Plan EIR, and would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Thus, a ***less-than-significant*** impact would occur.

XII. MINERAL RESOURCES. *Would the project:*		Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	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?	☐	☐	☐	✖
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?	☐	☐	☐	✖

Discussion

a,b. According to the City's General Plan, mineral deposits or mineral extraction activities are not located within the City's Planning Area.[29] Therefore, the Project would not 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 or result in the loss of availability of a locally-important mineral resource recovery site delineated in the City's General Plan. As such, ***no impact*** to mineral resources would occur as a result of development of the Project.

[29] City of Elk Grove. *General Plan* [pg. 7-25]. February 2019.

XIII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	✖	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	✖	☐	☐
c. For a project located within the vicinity of a private airstrip or 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 levels?	☐	☐	☐	✖

Discussion

a. The discussion below presents information regarding sensitive noise receptors in proximity to the site, applicable noise standards, the existing noise environment, and the potential for the Project to result in noise impacts during Project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to decibels (dB) in this report will be A-weighted unless noted otherwise.
- Day-Night Average Level (DNL or L_{dn}): The average sound level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.
- Community Noise Equivalent Level (CNEL): The cumulative noise exposure over a 24-hour period. Weighting factors of +5 and +10 dBA are applied to the evening and nighttime periods, respectively, to account for the greater sensitivity of people to noise during those periods.
- Equivalent Sound Level (L_{eq}): The average sound level over a given time-period.
- Maximum Sound Level (L_{max}): The maximum sound level over a given time-period.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Surrounding existing land uses include single-family residences to the north, east and west; and the planned Unity Park, single-family residences, and the Saini Walking and Bicycle Trail to the south, across Wayne Heintz Street. The nearest noise-sensitive receptors are the single-family residences located immediately north and west and within 50 feet to the east and south, of the site.

City Noise Standards

Pursuant to Section 6.32.100(E) of the Elk Grove Municipal Code, noise sources associated with construction are exempt from the City's noise standards, provided such activities only occur between the hours of 7:00 AM and 7:00 PM when located adjacent to

residential uses. Section 6.32.100(E) of the Elk Grove Municipal Code is reproduced below as follows:

> Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities only occur between the hours of 7:00 a.m. and 7:00 p.m. when located in close proximity to residential uses. Noise associated with these activities not located in close proximity to residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in progress be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 7:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

The Elk Grove General Plan Services, Health, and Safety Element Table 8-4 establishes standards for daytime and nighttime noise levels. The standards are reproduced in Table 8.

Table 8
Performance Standards for Typical Stationary Noise Sources

Noise Level Descriptor	Daytime (7 AM to 10 PM)	Nighttime (10 PM to 7 AM)
Typical Stationary Noise Sources – Hourly L_{eq}, dB	55	45
Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music – Hourly L_{eq}, dB	50	40

Source: City of Elk Grove, 2023.

The Services, Health and Safety Element of the Elk Grove General Plan establishes an exterior noise level standard of 60 dB DNL at outdoor activity areas of residential land uses exposed to transportation noise sources (i.e., traffic). The intent of this standard is to provide an acceptable exterior noise environment for outdoor activities. Where it is not possible to reduce noise in outdoor activity areas to 60 dB DNL through a practical application of the best available noise-reduction means, an exterior noise environment of up to 65 dB DNL may be allowed provided that available exterior noise level reduction measures have been implemented and applicable General Plan interior noise level criteria are satisfied. The General Plan utilizes an interior noise level standard of 45 dB DNL or less within interior spaces of residential uses. In addition, the General Plan notes that in cases where the existing ambient noise level exceeds 60 dBA, a permanent three dB increase would be considered substantial.

Construction Noise

During construction of the Project, heavy-duty equipment would be used for grading, excavation, paving, and landscaping, which would temporarily increase ambient noise level when in use. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders,

backhoes, dozers, and dump trucks would be used in association with Project construction.

The maximum noise level for various types of construction equipment at a distance of 50 feet is presented in Table 9, below.

Table 9
Construction Equipment Noise Levels

Type of Equipment	Maximum Noise Level at 50 Feet (dBA)
Auger Rill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.

Based on Table 9, activities involved in typical construction would generate maximum noise levels up to 90 dB at a distance of 50 feet. Typical construction noise sources include engine noise from construction vehicles, idling equipment, and power generators. In addition to on-site construction noise sources, noise would also be generated during the construction phase by increased truck traffic on area roadways.

Although construction activities are temporary in nature and would occur during normal daytime working hours, consistent with Section 6.32.100(E) of the Elk Grove Municipal Code, the temporary increase in noise levels due to construction would still result in a temporary noise level greater than 60 dB DNL at the nearest sensitive receptors, given that single-family residences abut the site boundaries to the north and west, and occur within 50 feet to the east and south of the site. Thus, temporary noise increases associated with construction activities, such as noise from internal combustion engines and construction equipment, including generators and air compressors, could be potentially significant. Construction-related noise could result in sleep interference at existing noise-sensitive receptors in the vicinity of the Project site if construction activities were to occur outside the normal daytime hours. Enforcement of time restrictions specified in the City's Noise Ordinance and the use of noise-dampened equipment would be required to ensure that the temporary or periodic increase in ambient noise levels in the Project vicinity associated with construction of the Project would not be considered substantial.

Operational Noise

Residences are not typically associated with the generation of substantial noise. Operation of the Project would include typical residential noise, which would be compatible with the adjacent existing residential uses. The Project is not anticipated to contribute a measurable operational noise level increase to the existing ambient noise environment at

any sensitive receptor locations. Therefore, a less-than-significant impact would occur with regard to on-site operational noise.

Furthermore, as discussed throughout this IS/MND, the site is currently designated PS and was previously anticipated for development of an elementary school. Thus, traffic noise level increases associated with the development of an elementary school on the site have been previously anticipated by the City. As presented in Figure 5.10-4 of the General Plan EIR, the future traffic noise level in the Project area were anticipated to be 60 dB L_{dn} when considering General Plan buildout conditions. However, the Project would include a GPA to designate the site as LDR, and would include the development of 56 single-family residences. According to the Transportation Impact Analysis and VMT Analysis prepared for the Project by Fehr & Peers (see Appendix J), anticipated trip generation would be reduced by 872 daily trips, 483 AM peak hour trips, and 74 PM peak hour trips under the proposed LDR designation as compared to traffic that would be generated under the PS designation previously anticipated for the site in the General Plan EIR. Therefore, development of the site with LDR uses would produce less traffic-related operational noise than what was previously anticipated for the site. As such, noise levels within the Project vicinity would not exceed the 60 dBA L_{dn} maximum and the Project would not be anticipated to substantially increase traffic noise in the Project vicinity.

Based on the above, operation of the Project is not predicted to generate noise levels in excess of existing ambient noise levels, or in excess of the City of Elk Grove exterior noise standards. Impacts related to creation of a substantial permanent increase in ambient noise levels in the Project vicinity would be less than significant.

Conclusion

Based on the above, existing sensitive receptors would not experience Project-related noise levels in excess of the City's applicable noise level standards. However, if construction were to occur outside of the allowable daytime hours, a potentially significant impact could occur. Thus, without the implementation of mitigation, a ***potentially significant*** impact would occur related to generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

XIII-1. *Prior to the approval of grading and/or building permits, the City shall establish the following requirements and note such requirements on improvement plans:*

- *Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be limited to between the daytime hours of 7 AM and 7 PM daily when located in close proximity to residential uses.*
- *Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations.*

Equipment engine shrouds shall be closed during equipment operation.

- *When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.*
- *Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or shielded to reduce noise-related impacts.*

The improvement plans shall be submitted to the City of Elk Grove Community Development Department for review and approval.

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception, as well as damage to structures, have been developed for vibration levels defined in terms of PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 10, which was developed by Caltrans, shows the vibration levels that would normally be required to result in damage to structures.

As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV. A threshold of 0.20 in/sec PPV is considered to be a reasonable threshold for short-term construction projects. The City of Elk Grove General Plan Policy N-1-9 establishes 0.20 in/sec PPV as the threshold at which additional vibration impact assessment reduction measures may be required.

During Project construction, heavy equipment would be used for grading, excavation, paving, and landscaping, which would generate localized vibration in the immediate vicinity of construction. The range of vibration source levels for typical construction equipment are shown in Table 11. The nearest noise-sensitive receptors are the single-family residences located immediately north and west of the site, and within 50 feet of the site to the east and south. Based on the typical vibration levels shown in the table below, construction activities associated with the Project would not exceed 0.20 PPV at over 25 feet away.

Construction activities would be temporary in nature and would be limited to between 7:00 AM and 7:00 PM per Chapter 6.32 of the Elk Grove Municipal Code.[30]

[30] Elk Grove Municipal Code Section 6.32.100 states that noise sources associated with the construction, repair, remodeling, demolition, paving or grading of any real property shall be exempted from the provisions of Chapter 6.32, provided said activities only occur between the hours of 7:00 AM and 7:00 PM when located in close proximity to residential uses. However, when an unforeseen or unavoidable condition occurs during a construction project

Table 10
Effects of Vibration on People and Buildings

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Transportation Related Earthborne Vibrations. Caltrans. TAV-02-01-R9601. February 20, 2002.

Table 11
Vibration Levels for Various Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)
Hoe Ram	0.089	0.032
Large Bulldozer	0.089	0.032
Casson Drilling	0.089	0.032
Loaded Trucks	0.076	0.027
Small Bulldozer	0.003	0.011
Jackhammer	0.035	0.012
Auger/Drill Rigs	0.089	0.031
Vibratory Compactor/Roller	0.210	0.074

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018.

However, because the closest sensitive noise receptors are located immediately north and west of the site, (i.e., less than 25 feet from construction activity), the Project could result in the exposure of persons to or generation of excessive groundborne vibration

and the nature of the project necessitates that work in progress be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 7:00 PM and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner."

levels. Therefore, a ***potentially significant*** impact could occur related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

XIII-2. *Any compaction required within 26 feet of existing structures adjacent to the site shall be accomplished by using static drum rollers, rather than vibratory compactors/rollers, which use weight instead of vibrations to achieve soil compaction. As an alternative, preconstruction crack documentation and construction vibration monitoring could be conducted to ensure that construction vibrations do not cause damage to any adjacent structures. The above requirements shall be included via notation on any future improvement plans approved for the Project to the satisfaction of the City's Community Development Department.*

c. The nearest airport to the site is the private use Sky Way Estates Airport-CL04, located approximately 5.8 miles northeast of the site. Given the substantial distance between the airport and the site, noise levels resulting from aircraft at the nearest airport would be negligible at the site. Given that the site is not located within two miles of a public airport or public use airport, the Project would not expose people residing or working in the Project area to excessive noise levels associated with such. Thus, ***no impact*** would occur.

XIV. POPULATION AND HOUSING. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	✖

Discussion

a. The Project includes the development of a residential subdivision consisting of 56 single-family lots on a parcel that is currently designated PS and is zoned as RD-5. The Project includes a GPA from PS to LDR and a Rezone from RD-5 to RD-6. As such, development of the site with residential uses has not been anticipated by the City's General Plan or General Plan EIR. According to current population estimates provided by the U.S. Census Bureau, the City of Elk Grove has a population of 178,444 residents and an average household size of 3.22 persons per household.[31] With the addition of 56 single-family lots, which would reasonably be developed into 56 residential units, the Project could result in a population increase of approximately 181 new residents. Assuming all residents of the Project are new residents to the City, the Project would result in a 0.1 percent population increase for the City.

Population growth itself does not constitute an environmental impact; rather, increased demands on the physical environment resulting from increases in population are considered environmental impacts. For example, increased demands on City services could require system upgrades, the construction of which could have environmental impacts. Physical environmental effects associated with development of the proposed Project are evaluated throughout this IS/MND. While the Project would result in population growth, such growth could be accommodated by existing public services and infrastructure, as discussed in Section XV, Public Services, and Section XIX, Utilities and Service Systems, of this ISMND, and would not result in significant adverse environmental effects. Therefore, the Project would not induce substantial unplanned population growth in an area, either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. The site is currently vacant and does not contain existing housing or other habitable structures. As such, the Project would not displace a substantial number of existing housing or people and would not necessitate the construction of replacement housing elsewhere, and ***no impact*** would occur.

[31] United States Census Bureau. *QuickFacts: Elk Grove city, California*. Available at: https://www.census.gov/quickfacts/elkgrovecitycalifornia. Accessed January 2025.

XV. 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 Incorporated	Less-Than-Significant Impact	No Impact
a. Fire protection?	☐	☐	✖	☐
b. Police protection?	☐	☐	✖	☐
c. Schools?	☐	☐	✖	☐
d. Parks?	☐	☐	✖	☐
e. Other Public Facilities?	☐	☐	✖	☐

Discussion

a. Fire protection services in the City of Elk Grove are provided by the Cosumnes Community Services District (CCSD).[32] Services include fire suppression, emergency medical services, technical rescue, and arson and explosion investigations. The CCSD has 222 full-time personnel in its Operations Division and operates out of nine fire stations with nine advanced life support engine companies, one aerial ladder truck company, and eight rescue ambulance units, as well as other specialized apparatus for specialized emergency circumstances; in 2024, the CCSD responded to 24,609 incidents, an increase from the prior four years.[33] The nearest fire station to the site is Fire Station 71, located at 8760 Elk Grove Boulevard, approximately 2.5 miles west of the site.

The CCSD would provide fire protection services to the proposed residential development. The General Plan EIR concluded that while buildout of the Planning Area would result in an increased demand for fire protection and emergency medical services, compliance with applicable regulations and General Plan policies would ensure that new fire station siting and resources are available and that required environmental review under CEQA would be conducted as specific fire protection facilities are proposed. As noted in the General Plan EIR, three new fire stations are currently planned within the City's Planning Area: Station 77, to be located within the Laguna Ridge Specific Plan Area near Whitelock Parkway; Station 78, to be located within the South Pointe Land Use Policy Area near Kammerer Road; and Station 79, to be located within the Eastern Elk Grove Community Plan Area near Grant Line Road. Given the Project's proximity to the existing Fire Station 71, new fire stations would not be required in order to provide adequate fire protection service to the Project.

In addition, the Project would be subject to payment of a Fire Fee in accordance with Chapter 16.85 of the Elk Grove Municipal Code, which is used to pay for costs associated with development of new fire stations. Furthermore, the proposed buildings would be constructed in accordance with the fire protection requirements of the most recent California Fire Code. The CCSD would review the Project building plans to ensure compliance with all California Fire Code requirements.

[32] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.11-1]. February 2019.

[33] Cosumnes Fire Department. *2024 Annual Report*. Available at: https://cosumnescsd.gov/DocumentCenter/View/27704/2024-Calendar-Year-Cosumnes-Fire-Department-Summary-Infographic?bidId=. Accessed March 2025.

Based on the above, the Project would result in a ***less-than-significant*** impact related to the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts.

b. Police protection services within the City of Elk Grove are provided by the City of Elk Grove Police Department (EGPD). As noted in the General Plan EIR, the EGPD operates primarily out of two facilities located in the City Hall complex at 8380 and 8400 Laguna Palms Way. The service area is split into five police beats that are regularly patrolled. The EGPD has an authorized strength of 153 sworn officers and 115 civilian personnel and respond to approximately 85,000 service calls each year.[34] In addition to the EGPD, the California Highway Patrol provides traffic regulation enforcement, emergency accident management, and service and assistance on State roadways, as well as traffic regulation enforcement throughout the State (including in the City), from its station located at 6 Massie Court, near the interchange of Mack Road and SR 99.

The General Plan EIR concluded that while buildout of the Planning Area results in an increased demand for law enforcement services, resulting in new patrols, identified growth areas within the City would be adequately served by the EGPD's existing facilities, and construction of new facilities is not likely to be required. While the General Plan designates the site for public services, as compared to the residential development proposed for the Project, because the Project would not result in a significant increase in population and is located in a developed area that is already served by the EGPD, the Project would not result in substantially increased demands for law enforcement services relative to buildout of the site under the proposed land use designations.

Furthermore, the Project would be subject to payment of the City's Capital Facilities Fee, as required by Chapter 16.95 of the Elk Grove Municipal Code. According to the City of Elk Grove special tax districts website, the Project has been annexed into Community Facilities District (CFD) 2003-2, also known as the Police Services CFD.[35] As such, the site would be subject to Payment of such fees used to pay for new staff and equipment required to provide law enforcement services to new development within the City, such as the Project.

Given required payment of the City's Capital Facilities Fee, consistent with Chapter 16.95 of the Elk Grove Municipal Code, the Project would have a ***less-than-significant*** impact related to the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts.

c. School services in the City are provided by the EGUSD. As noted in the General Plan EIR, the EGUSD provides education to over 62,000 students and operates 66 schools: 42 elementary schools, nine middle schools, nine high schools, one alternative education school, four continuation schools, and one special education school. Enrollment at the EGUSD has remained relatively constant since the 2011/12 school year. As discussed throughout this IS/MND, the site was previously planned for development as a school, however, the school district determined that the school was not needed.

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[34] City of Elk Grove. *About the Elk Grove Police Department*. Available at: https://elkgrove.gov/departments-and-divisions/police-department. Accessed March 2025.

[35] City of Elk Grove. *Mello-Roos CFDs.* Available at: https://elkgrove.gov/special-tax-districts/mello-roos-community-facilities-districts-cfds. Accessed May 2025.

The Project includes the subdivision of the site with a total of 56 single-family lots and, thus, would increase demand for school facilities and services. Table 5.11.3-2, Student Generation Rates, of the General Plan EIR, presents the EGUSD student generation rates for single-family units for elementary (0.4044), middle (0.1108), and high school (0.2004). Using the foregoing student generation rates, the Project is anticipated to generate a total of 42 school-aged children, including 23 elementary school students, 7 middle school students, and 12 high school students. Such an increase in student population would not be large enough to be considered significant and would not be anticipated to exceed the EGUSD's existing capacity, and, thus, would not significantly increase demand for school facilities and services.

Furthermore, the EGUSD collects development fees for new residential Projects on a per square foot basis. The development fees serve to offset school facility costs associated with serving new students. The Leroy F. Green School Facilities Act prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act…involving …the planning, use, or development of real property" (Government Code 65996(b)). Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation."

Because the Project applicant would be required to pay development fees to the EGUSD, the Project would result in a ***less-than-significant*** impact regarding an increase in demand for schools.

d,e. Parks and recreation services within the City are provided by the CCSD through the CCSD's Parks and Recreation Department. The CCSD plans and designs new parks, owns, operates, and maintains parks and community centers, manages rentals of community centers, picnic sites, and sports fields, and offers recreation programs; recreational opportunities offered by the CCSD include, but are not limited to, 97 parks, 21 miles of trails, 36 multipurpose sports fields, two aquatic centers, and eight recreation buildings as of 2018.[36] The nearest existing park is Al Gates Park, located approximately 1,700 feet northwest of the site.

The CCSD parkland standards, as established in Section 22.40.032 of the Elk Grove Municipal Code, and General Plan Policy PT-1-3 require a minimum of five acres of developed parkland per 1,000 residents. In addition to parkland requirements established in Policy PT-1-3, General Plan Policy PT-1-5 requires assurance of funding for maintenance of parks and/or trails prior to City approval of any Final Subdivision Map that contain or contributes to the need for public parks and facilities.

As discussed in Section XIV, Population and Housing, of this IS/MND, the Project would house an estimated 181 future residents. Thus, in order to meet the City's parkland standard of five acres per 1,000 residents, the Project would be required to provide a minimum of 0.9 acres of parkland on-site. Given that the Project does not currently include on-site parkland, payment of an in-lieu fee would be required pursuant to Section 22.40.040 of the Elk Grove Municipal Code.

[36] City of Elk Grove. *General Plan* [pg. 5.11-15]. February 2019.

With required payment of in-lieu park fees, the Project would have a ***less-than-significant*** impact related to the need for new or physically altered parks or other public facilities, the construction of which could cause significant environmental impacts.

XVI. RECREATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	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?	☐	☐	✖	☐
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?	☐	☐	✖	☐

Discussion

a,b. As discussed in Section XIV, Population & Housing, the Project involves the development of a residential subdivision consisting of 56 single-family lots, which are anticipated to serve approximately 181 residents. Thus, an increase in demand on recreational facilities is anticipated. The parkland dedication standards set forth in Section 22.40.032 of the Elk Grove Municipal Code and General Plan Policy PT-1-3 require a minimum of five acres of developed parkland per 1,000 residents. In addition to parkland requirements established in Policy PT-1-3, General Plan Policy PT-1-5 requires assurance of funding for maintenance of parks and/or trails prior to City approval of any Final Subdivision Map that contain or contributes to the need for public parks and facilities. As stated in Section XV, Public Services, of this IS/MND, the Project would not include dedication of sufficient land to the City for recreational facilities; therefore, the Project applicant would be subject to in-lieu fees required per the Elk Grove Municipal Code. Payment of the in-lieu fees would contribute toward the acquisition of off-site parkland in the area to maintain the City's required ratio of five acres of parkland per 1,000 residents. The Project would also be subject to payment of fees to the CCSD that would be used to maintain existing recreational facilities, thus offsetting potential physical deterioration of such facilities resulting from the increase in population associated with the Project.

Given payment of the applicable fees, the Project would not result in substantial physical deterioration of any existing neighborhood or regional parks or other recreational facilities, and would not result in adverse physical effects related to the construction or expansion of new facilities, and a ***less-than-significant*** impact would occur.

XVII. TRANSPORTATION. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	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?	☐	✖	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	✖	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	✖	☐
d. Result in inadequate emergency access?	☐	☐	✖	☐

Discussion

a. The law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used level of service (LOS) to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the State Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of SB 743 (2013), PRC Section 21099, subdivision (b)(1), directed the Governor's Office of Planning and Research (OPR), currently known as the Governor's Office of Land Use and Climate Innovation (LCI), to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [LCI] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

Subdivision (b)(2) of Section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics added.)

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018, which became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel.

Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."[37]

Please refer to Question 'b' for a discussion of VMT.

Consistency with California Department of Transportation (Caltrans) Facilities

Prior project analysis has identified that in the cumulative conditions, continued development in the City of Elk Grove and other portions of south Sacramento County will have impacts on State facilities. To address this, the I-5 Subregional Fee program was developed between the City of Elk Grove, the cities of Sacramento and West Sacramento, and Caltrans. Policy MOB-7-4 in the City General Plan requires development applications to pay this fee in order to fund the necessary improvements. Payment of the fee would be required by Mitigation Measure XVII-1. Thus, the Project would not conflict with applicable Caltrans policies, and a less-than-significant impact would occur with implementation of mitigation.

Consistency with City of Elk Grove General Plan Policies - Transit, Bicycle, and Pedestrian Facilities

The following section discusses the availability of bicycle and pedestrian facilities and transit service and facilities in the Project area based on the Transportation Impact Analysis and VMT Analysis prepared for the Project by Fehr & Peers (see Appendix J).[38]

Pedestrian and Bicycle Facilities

Existing and proposed pedestrian and bicycle facilities in the Project vicinity are discussed below.

Pedestrian facilities are provided along the western side of Waterman Road from Wayne Heintz Road to Elk Grove Boulevard. Sidewalks are present on both sides of Waterman Road from Charolais Way through Elk Grove Boulevard, and the sidewalks on the eastern portion of Waterman Road are buffered from the roadway by landscape planters. In addition, the City of Elk Grove maintains three classes of bicycle facilities (Class I, Class II, and Class III). Pursuant to Figure 12, Existing and Proposed Bicycle and Pedestrian Network, of the City's Bicycle, Pedestrian, and Trails Master Plan[39] Class II bike lanes (on-street with signage and striping) are provided in both directions on Waterman Road and Class III bike routes are provided along the full length of Mainline Drive from Waterman Road to Elk Grove Boulevard. Additionally, the Saini walking and bicycling trail is located 400 feet south of the project, allowing pedestrian and bicycle access.

As part of the VMT Analysis, Fehr & Peers used a tool called Streetscore+ to evaluate Pedestrian and Bicycle Level of Traffic Stress (LTS), which refers to pedestrian and bicyclist comfort associated with a roadway or intersection. The Transportation Impact

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37 Subdivision (b)(2) of Section 15064.3 ("transportation projects") provides that "[t]ransportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

38 Fehr & Peers. *Milestone II Rezone – Transportation Impact Analysis and VMT Analysis*. March 26, 2025.

39 City of Elk Grove. *Bicycle, Pedestrian, and Trails Master Plan.* [pg. 50]. May 2021

Analysis and VMT Analysis calculated the Pedestrian Street Score under current conditions and current plus project conditions for Waterman Road, Wayne Heintz Street, and Wyland Drive. The City of Elk Grove currently identifies Waterman Road as LTS 3, Wayne Heintz Street as LTS 2, and Wyland Drive as LTS 2. The Transportation Impact Analysis and VMT Analysis determined that the LTS along Waterman Road, Wayne Heintz Street, and Wyland Drive would not change under the Proposed Project. Thus, the project would not degrade the pedestrian street score LTS.

The new sidewalks proposed along Wayne Heintz Street and Wyland Drive are a current part of the City's Bicycle, Pedestrian, and Trails Master Plan. As part of the Project, the portion of Wyland Drive along the site's western boundary and the portion of Wayne Heintz Street along the Project's southern boundary would include improvements to the Project frontage including new four-foot-wide sidewalks. A Design Exception has been approved allowing the street section for Wayne Heintz Street to have an attached sidewalk rather than the City standard detached sidewalk so that the sidewalk matches the existing street sections in the Project vicinity. Additionally, the Project includes improvements to the site's frontages along Wyland Drive, which would provide a connection between the existing bike lane north of the site, the proposed and existing pedestrian facilities south of the site, and the proposed internal sidewalks along A Street at the proposed connection to the sidewalks on Wyland Drive. As such, through compliance with the approved Design Exception and implementation of the foregoing improvements, the Project would be consistent with the local plan addressing the circulation system and improve the pedestrian and bicycle connectivity in the area. Thus, the existing and proposed pedestrian and bicycle facilities are anticipated to have substantial capacity to accommodate any pedestrian and bicycle traffic generated from implementation of the Project.

Transit Service and Facilities

Transit services in the City of Elk Grove are provided by E-tran, which is operated by Sacramento Regional Transit (SacRT). In addition, the site is served by SacRT's SacRT Flex Microtransit, which is an on demand smart ride service. Currently, the closest service to the site is Commuter Route E16, Local Routes E115, and Local Route E116. The nearest stops from the site are on Elk Grove Boulevard at the cross streets of Waterman Road and Black Swan Drive, one mile north of the project site. The local routes run on Elk Grove Boulevard to Bruceville Road (E116) and Bond Road to Elk Grove Florin Road to Power Inn Road (E115) with service to/from Cosumnes River College. Route E16 runs along Elk Grove Boulevard west to/from SR 99 and serves Downtown Sacramento.

Although the Project requires approval of a GPA and Rezone from commercial to residential uses, both the existing and proposed land uses are urban in nature. As such, development of the site with urban uses has already been considered by the City and evaluated in the General Plan EIR. General Plan Policies MOB-5-6 and MOB-5-7 encourage the provision of the appropriate level of transit service in all areas of the City and the extension of bus rapid transit and/or light rail service (referred to as "fixed transit") to existing and planned employment centers. Accordingly, General Plan EIR Impact 5.13.7 concludes that buildout of the General Plan, which includes buildout of the site, would result in less-than-significant impacts related to transit facilities. Additionally, the Transportation Impact Analysis and VMT Analysis identified that the local bus service runs at approximately two passengers per hour, indicating that the demand for transit in the Project area is generally low. Routes performing at low levels of demand would have

excess seated and standing capacity, and as such the Project would not create demand for transit services in excess of the current capacity of the transit system.

Therefore, implementation of the Project would result in a less-than-significant impact related to transit service and facilities.

Conclusion

As noted above, without the payment of the I-5 Subregional Fee, a ***potentially significant*** impact could occur related to Caltrans facilities. However, with implementation of mitigation, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, bicycle, and pedestrian facilities; thus, a less-than-significant impact would occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XVII-1. *Prior to issuance of building permits, the Project applicant shall pay the applicable I-5 Subregional Fee in effect at the time of payment, consistent with Sections 16.97.040 and 16.97.050 of the Elk Grove Municipal Code. Receipt of payment shall be provided to the City of Elk Grove Community Development Department.*

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Pursuant to Section 15064.3, analysis of VMT attributable to a project is the most appropriate measure of transportation impacts. Other relevant considerations may include the effects of the project on transit and non-motorized travel.

Pursuant to General Plan Policy MOB-1-1, new development projects are required to demonstrate a 15 percent reduction in VMT from 2015 conditions. To demonstrate this reduction, conformance with following land use and cumulative VMT limits is required:

1. Development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, as shown in Table 6-1 of the General Plan, which incorporates the 15 percent reduction from 2015 conditions; and
2. Development projects located within the existing City limits shall demonstrate that cumulative VMT within the City, including the project, would be equal to or less than the established Citywide limit of 6,367,833 VMT (total daily VMT).

As part of the VMT Analysis, Fehr & Peers re-estimated the VMT conditions for 2020 to provide a consistent basis of evaluating the Project, a key requirement of SB 743, in order to ensure that the effects of the Project are accurately identified. Using the EGSIM20 Travel Demand Model, Fehr & Peers updated the 2015 conditions presented in General Plan Policy MOB-1-1 to reflect 2020 conditions. Fehr & Peers determined that under 2020 conditions, the Citywide limit of total daily VMT is 8,072,194 VMT, and the City's VMT per service population limit for the LDR land use, with the 15 percent reduction in total VMT from the 2020 baseline incorporated, is 19.3 VMT per service population.

Using the EGSIM20 Travel Demand Model, Fehr & Peers determined that the Project would generate 19.3 VMT per service population, which does not exceed the 19.3 VMT per service population for the LDR land use. In addition, Fehr & Peers determined that cumulative VMT within the City, including the Project, would be 8,058,238 total daily VMT, which does not exceed the 8,072,194 total daily VMT Citywide limit. Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and a ***less-than-significant*** impact would occur.

c,d. Although the Project includes alterations to Wayne Heintz Street and Wyland Drive, all such improvements would be required to comply with local, State, and federal standards, which would ensure that the alterations to the existing transportation network would not result in hazards due to a geometrical design feature. As previously discussed, the Project would include a Design Exception to allow the street section for Wayne Heintz Street to have an attached sidewalk rather than the City standard detached sidewalk so that the sidewalk matches the existing street sections in the Project vicinity. In addition, another Design Exception for the Project would allow modification of the Street Section for Wyland drive to have a 42-foot ROW rather than the City standard of 40 feet. The Design Exception would ensure both sides of the road are constructed similarly and increase the overall ROW space for circulation. Finally, the new internal roadway A would provide two new access points to the site.

During Project construction, public roads in the vicinity would remain open and available for use by emergency vehicles and other traffic. The Project would also be required to comply with all building, fire, and safety codes and specific development plans would be subject to review and approval by the City's Public Works Department. Required review would ensure that the proposed circulation system for the site would provide adequate emergency access.

Implementation of the Project would introduce additional vehicle traffic along Wayne Heintz Street and Wyland Drive. However, the site was originally planned for the development of an elementary school within the EGUSD, in compliance with the existing land use designation. Impacts related to hazards and emergency access associated with the site were previously analyzed and anticipated under Impact 5.13.5 and 5.13.6 of the General Plan EIR and determined to be less than significant.

According to the Transportation Impact Analysis and VMT Analysis prepared for the Project anticipated trip generation would be reduced by 872 daily trips, 483 AM peak hour trips, and 74 PM peak hour trips under the LDR designation as opposed to the PS designation previously anticipated in the General Plan EIR. Therefore, the additional vehicle traffic associated with the Project would not result in any increased safety access impacts. In addition, the General Plan EIR noted that any new transportation facility improvements required as part of General Plan buildout would be constructed based on industry design standards consistent with Policy MOB-3-10, which stresses that the safety of the most vulnerable user is a priority.

Based on the above, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), and would not result in inadequate emergency access. Therefore, a ***less-than-significant*** impact would occur.

XVIII. TRIBAL CULTURAL RESOURCES. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	☐	✖	☐	☐
b. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	✖	☐	☐

Discussion

a,b. As discussed in Section V, Cultural Resources, of this IS/MND, based on the results of a search of the NAHC Sacred Lands File, the site does not contain any known Tribal Cultural Resources.[40]

In compliance with AB 52 (PRC Section 21080.3.1) and SB 18, on June 3, 2024, the City provided formal notification letters to the following tribes that had requested notification: Buena Vista Rancheria of Me-Wuk Indians; Calaveras Band of Mi-Wuk Indians; California Valley Miwok Tribe; Chicken Ranch Rancheria of Me-Wuk Indians; Ione Band of Miwok Indians; Jackson Rancheria Band of Miwuk Indians; Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Pakan'yani Maidu of Strawberry Valley Rancheria; Shingle Springs Band of Miwok Indians; Tsi-Akim Maidu of the Taylorsville Rancheria; United Auburn Indian Community of the Auburn Rancheria; and Wilton Rancheria. Requests for consultation were not received within the required response period.

The site has been subject to previous disturbance, including regular disking/mowing for weed abatement, use as a staging area for construction of surrounding residences, and past agricultural activities including dry farming and grazing. The CHRIS records search results indicate that the site is located in a part of Sacramento County that is known as the ethnographic-period territory of the Plains Miwok. However, the site has been previously surveyed for indigenous-period, ethnographic-period, and historic-period cultural resources with negative results. Additionally, according to the CHRIS the site has low potential for containing previously unrecorded underground tribal cultural resources.

Based on the above, known tribal cultural resources do not exist within the site. Nevertheless, the possibility exists that previously unknown tribal cultural resources could be uncovered during grading or other ground-disturbing activities. However, implementation of Mitigation Measure XVIII-1 would ensure that a ***less-than-significant*** impact to tribal cultural resources would occur.

[40] Native American Heritage Commission. *Milestone II GPA/Rezone, and Map Project, Sacramento County.* April 15, 2024.

Mitigation Measure(s)

Implementation of the following mitigation measure, which refers to the mitigation measures presented previously in Section V of this IS/MND, would reduce the above impact to a *less-than-significant* level.

XVIII-1. Implement Mitigation Measures V-1, V-2, V-3, and V-4.

XIX. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	✖	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	✖	☐
c. 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?	☐	☐	✖	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	✖	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a-c. The sections below describe the wastewater, water supply, stormwater drainage, electric power, and telecommunications infrastructure necessary to serve the Project.

Wastewater Infrastructure

Sewer service for the Project would be provided by SacSewer. SacSewer owns, operates, and maintains a network of 107 pump stations and approximately 80 miles of pressurized force main pipes.[41] SacSewer trunk sewer pipes function as conveyance facilities to transport the collected wastewater flows to the SacSewer interceptor system. As part of the Project, a new network of eight-inch sewer lines would be installed throughout the site and would connect to the existing 10-inch sewer mains within Wyland Drive and Wayne Heintz Street, east and south of the site.

Pursuant to the General Plan EIR, the EchoWater Resource Recovery Facility treats an average of 181 million gallons per day (mgd). Wastewater is treated by accelerated physical and natural biological processes before discharge to the Sacramento River. The EchoWater Resource Recovery Facility's reliable capacity is currently limited, based on hydraulic considerations, to an equivalent 207 mgd average dry weather flow (ADWF). The EchoWater Resource Recovery Facility has been master planned to accommodate 350 mgd ADWF following planned improvements. In addition, SacSewer has prepared a long-range master plan for the large-diameter interceptors that transport wastewater to

[41] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-26]. February 2019.

the EchoWater Resource Recovery Facility. The master plan includes interceptor upgrades/expansions to accommodate anticipated growth through 2035.[42]

The Project requires a GPA from PS to LDR. Using the General Plan EIR's assumption of 310 gallons of wastewater per day per residential dwelling unit, operation of the Project would contribute a total of approximately 17,360 gallons of wastewater per day. Per the EchoWater Resource Recovery Facility's NPDES Permit (No. CA0077682), adopted in April of 2021, the ADWF at that time was approximately 181 mgd.[43] As such, the SRWTP was operating at approximately 69 percent of permitted capacity according to the City's General Plan (124 mgd treated daily/181 mgd ADWF cap = 0.6850). Therefore, adequate capacity exists to treat the additional 17,360 gallons of wastewater that would be generated by the Project. In addition, the Project applicant would be required to pay sewer impact fees to the sewer district, which would contribute towards the cost of future upgrades of the EchoWater Resource Recovery Facility. Required payment of sewer impact fees would ensure that the EchoWater Resource Recovery Facility receives adequate funding for necessary future improvements. Therefore, a less-than-significant impact would occur related to construction of new or expanded wastewater facilities.

Water Supply Infrastructure

The City of Elk Grove is served by three water service providers: the SCWA; the Elk Grove Water District; and the Omochumne-Hartnell Water District. As noted above, the Project would be served by the SCWA. The SCWA uses purchased water, surface water, groundwater, and recycled water as sources of water supply. The site is located within the SCWA's 40/41 service area and within the 2030 Water Supply Master Plan (WSMP) study area.

Since approval of the WSMP, the SCWA has produced amendments to the WSMP for the following areas: Cordova Hills (approved 2011), Jackson Township (pending approval), New Bridge (pending approval), and West Jackson (pending approval). In 2016, SCWA also developed the Water System Infrastructure Plan (WSIP). The WSIP is a staff-level document that describes the projected water supply infrastructure needs to meet the projected built-out water demands in Zone 40, including the demands associated with buildout of the site. Subsequently, the 2015 Urban Water Management Plan (UWMP) was developed using the same water demand and supply information analyzed in the WSIP. Thus, the 2015 UWMP demand projections include the estimated demands associated with buildout of the site.

The City of Elk Grove's General Plan currently designates the site as PS; the City's General Plan EIR estimated that PS land uses would be expected to generate 0.81 acre-feet (AF) of water per acre per year.[44] The site consists of approximately 10.38 acres; therefore, the existing land use designation for the site would be anticipated to generate demand for approximately 8.41 AF of water per year (AFY). The Project requires a GPA from PS to LDR. LDR land uses are estimated to generate 2.13 AF of water per acre per year, bringing the total estimated water demand for the Project to 22.11 AFY for the 10.38-acre site. Thus, the difference in water demand between the existing and proposed land uses is approximately 13.7 AFY, or 4,462,166 gallons of water per year. The Project would

[42] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-27]. February 2019.
[43] California Regional Water Quality Control Board, Central Valley Region. Order No. R5-2021-0019 NPDES No. CA0077682 [pg 5-6]. April 2021.
[44] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-22]. February 2019.

therefore represent an increase in water demand. However, SWCA has a projected 18,853 AF water surplus by 2040. Therefore, SCWA's water supplies would be sufficient to satisfy water demands associated with the Project while still meeting the current and projected water demands of existing customers within the SCWA service area.

Water supply to the proposed development would be provided by the SCWA by way of a new network of eight-inch water lines installed on the site, which would connect to the existing 12-inch water main in Wyland Drive. Given that the Project would connect to existing water supply lines located in the Project vicinity, construction of substantial off-site water supply infrastructure would not be required. Although the Project requires a GPA to change the site's land use designation from PS to LDR and a Rezone from RD-5 to RD-6, construction of on-site water supply improvements associated with urban development has been previously anticipated by the City and analyzed in the General Plan EIR. Therefore, a less-than-significant impact would occur related to construction of new or expanded water supply facilities.

Stormwater Infrastructure

The site is currently undeveloped vacant land and has been previously graded. Completion of the Project would increase site runoff due to the introduction of impervious surfaces to the site. As described previously, a new network of 15-, 18-, 24-, 30-, and 42-inch underground storm drains would direct flows to the proposed Lot A LID stormwater facility in the southwest corner of the site. An existing 12-inch storm drain line is located in the southern boundary of the LID facility and would allow stormwater collected in the LID stormwater facility to be conveyed to the existing City stormwater system within Wayne Heintz Street.

As discussed in further detail in Section X, Hydrology and Water Quality, of this IS/MND, adequate capacity would be available within the on-site water retention and LID stormwater facilities to capture runoff from the proposed impervious surfaces. Therefore, the Project would result in a less-than-significant impact with respect to requiring or resulting in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Electricity, Natural Gas, and Telecommunications Facilities

The site is located within a developed area of the City of Elk Grove and is situated within close proximity to existing electric power, natural gas, and telecommunications facilities. Although the Project requires approval of a GPA and Rezone, buildout of the site with urban uses was anticipated by the City and accounted for in utility planning. Therefore, implementation of the Project would implement the development that has been planned for the site, substantial expansion of off-site utilities would not be required to serve the proposed development, and associated environmental effects would not occur.

Conclusion

Based on the above, a ***less-than-significant*** impact would occur related to requiring or resulting in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects, or resulting 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.

d,e. Republic Services provides solid waste collection, disposal, recycling, and yard waste services to residential development within the City of Elk Grove. As noted in the General Plan EIR, the City is served by a total of ten landfills, the majority of which had over 70 percent available remaining capacity as of 2019.[45] Due to the substantial amount of available capacity remaining at the landfills serving the City, sufficient capacity would be available to accommodate the Project's solid waste disposal needs. In addition, the Project would be required to comply with all applicable solid waste regulations, including Title 30, Solid Waste Management, of the Elk Grove Municipal Code, as well as Chapter 30.90, the City's Space Allocation and Enclosure Design Guidelines for Trash and Recycling. Given compliance with the foregoing requirements, a ***less-than-significant*** impact related to solid waste would occur as a result of the Project.

[45] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-32]. February 2019.

XX. WILDFIRE. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	✖
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?	☐	☐	☐	✖
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?	☐	☐	☐	✖
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?	☐	☐	☐	✖

Discussion

a-d. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the site is not located within or near a Very High Fire Hazard Severity Zone or State Responsibility Area.[46] As such, the Project would not be expected to be subject to or result in substantial adverse effects related to wildfires, and ***no impact*** would occur.

[46] California Department of Forestry and Fire Protection. *Sacramento County, Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE*. March 13, 2023.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to substantially 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, substantially 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?	☐	☐	✖	☐
b. Does the project 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)?	☐	☐	✖	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	✖	☐

Discussion

a. As discussed in Section IV, Biological Resources, of this IS/MND, while the potential exists for Crotch bumble bee, monarch butterfly, burrowing owl, Swainson's hawk, white-tailed kite, and nesting migratory birds and raptors protected by the MBTA to occur on the site, Mitigation Measures IV-1 through IV-6 ensure that impacts to such species would be reduced to a less-than-significant level. The site is undeveloped and does not contain any known historic or prehistoric resources. Thus, implementation of the Project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources, including tribal cultural resources. Nevertheless, Mitigation Measures V-1 through V-4 ensure that, in the event that historic or prehistoric resources are discovered within the site during construction activities, such resources are protected in compliance with the requirements of CEQA.

Considering the above, the Project would not: 1) degrade the quality of the environment; 2) substantially reduce or impact the habitat of fish or wildlife species; 3) cause fish or wildlife populations to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. The Project in conjunction with other development within the City of Elk Grove could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of Project implementation would be reduced to a less-than-significant level with implementation of Project-specific mitigation measures and compliance with applicable General Plan policies. As discussed in Section XVII of this IS/MND, while the Project includes generation of vehicle trips on local roadways, the site is located within an area determined to result in an average service population VMT 15 percent below the City's existing baseline limit. As such, development of the Project was analyzed in the General Plan EIR and determined to result in less-than-significant impacts related to VMT. In addition, as

noted in Section VIII, Greenhouse Gas Emissions, the Project is consistent with the City's CAP, thereby resulting in a less-than-significant impact related to cumulative GHG emissions.

When viewed in conjunction with other closely related past, present, or reasonably foreseeable future Projects, development of the Project would not result in a cumulatively considerable contribution to cumulative impacts in the City of Elk Grove, and the Project's cumulative impact would be ***less than significant***.

c. As described in this IS/MND, the Project complies with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, and mitigation measures included herein. In addition, as discussed in the Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, and Noise sections of this IS/MND, the Project would not cause substantial effects to human beings, which cannot be mitigated to less-than-significant levels, including effects related to exposure to air pollutants, geologic hazards, GHG emissions, hazardous materials, and excessive noise. As such, the Project would not result in direct or indirect impacts to human beings and, thus, the Project's impact would be ***less than significant***.

APPENDIX A

GHG EMISSIONS MEMORANDUM

November 2024

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Subject: Milestone II Residential Project – Greenhouse Gas Emissions Memorandum

BACKGROUND AND PURPOSE

The City of Elk Grove Climate Action Plan (CAP) serves as the City's "plan for the reduction of greenhouse gases", per Section 15183.5 of the CEQA Guidelines, which provides the opportunity for tiering and streamlining of project-level greenhouse gas (GHG) emissions analysis for certain types of projects subject to CEQA review. The City ensures the appropriate use of the CAP for CEQA streamlining by maintaining the prerogative to use mandatory and voluntary measures as standards for new developments seeking streamlining as part of the CAP Consistency review process, as appropriate. By using a CAP Consistency Review Checklist (i.e., CAP Checklist) for projects subject to environmental review that are not otherwise exempt from CEQA, the City provides the opportunity for tiering and streamlining of project-level GHG analysis that avoids the need for a full GHG emissions analysis as part of the environmental review process. A CAP Checklist serves as a tool for the City and applicants to determine whether the project is eligible for streamlining, and if so, which GHG reduction measures would be required to be included as mitigation measures or conditions of approval for different types of development projects in the City in order to qualify for streamlining under CEQA Section 15183.5. By completing the CAP Checklist and demonstrating that a project is eligible and includes all applicable GHG measures, a project may demonstrate CAP consistency and, as a result, the project's GHG emissions impacts would be determined to be less than significant.

The Project is proposing a General Plan Amendment to allow for the development of 56 single family residential units in an area currently designated for a Public Facility land use, specifically an elementary school. According to the CAP Checklist, since the Project is proposing a General Plan Amendment a comparison of emissions generated by the maximum buildout of the existing designation (an elementary school on 10.38 acres) and the maximum buildout of the proposed designation (56 single family residences) is required. This memorandum documents the emissions modeling calculation results of this comparison. In the case that the Proposed Project is determined to result in an equivalent or less GHG emissions when compared to the existing designation, it can be determined that the proposed General Plan Amendment does not conflict with the CAP.

PROJECT LOCATION AND DESCRIPTION

The Project Site is located in the City of Elk Grove (City) at the northwest corner of Wayne Heinz Street and Wayland Drive. The Project is proposing the development of 56 single family units on a 10.38-acre parcel. Additionally, the Project proposes the construction of a street, sidewalks, and a low impact development facility lot used for storm drainage within the development.

ENVIRONMENTAL SETTING

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

In 2024, CARB released the 2024 edition of the California GHG Emissions from 2000 to 2022: trends of Emissions and Other Indicators report. In 2022, California emitted 371.1 million metric tons of CO2e. This inventory is 2.4 percent lower than in 2021. The 2022 emissions data shows that the State of California is continuing its established long-term trend of GHG emission declines, despite the anomalous emissions trends from 2019 through 2021, due in large part to the impacts of the COVID-19 pandemic. Overall trends in the Inventory continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross state product (GSP) is declining. California's GSP increased by 0.7 percent in 2022, and emissions per GSP declined by 3.1 percent from 2021 to 2022. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2022, accounting for approximately 37.7 percent of total GHG emissions in the state. Transportation emissions have decreased 3.6 percent from 2021 levels due to reductions from on-road, rail and, to a lesser extent,

intrastate aviation transportation. Emissions from the electricity sector account for 16.1 percent of the Inventory, which is a decrease of 4.1 percent since 2021, despite the growth of in-state solar, wind, and hydropower energy generation. California's industrial sector accounts for the second largest source of the state's GHG emissions in 2022, accounting for 19.6 percent, which saw a decrease of 2 percent since 2021 (CARB 2024).

REGULATORY SETTING

Local

City of Elk Grove Climate Action Plan

On February 27, 2019, the City Council adopted an updated CAP for the City as part of the General Plan Update. The CAP was amended in 2022. The City of Elk Grove CAP is a strategic planning document that identifies sources of GHG emissions within Elk Grove and reduces emissions through energy use, transportation, land use, water use, and solid waste strategies (referred to as "measures" in the CAP). The City's primary motivation for preparing the CAP is to enable new development projects consistent with the CAP and General Plan to tier from the CAP's environmental review process and streamline subsequent project-level analysis. Tiering and streamlining of project-level GHG analysis is achieved by using the CAP Checklist, as previously described. The CAP Checklist serves as a tool for the City and applicants to determine whether projects are eligible for streamlining, and if so, which GHG reduction measures would be required to be included as mitigation measures or conditions of approval for different types of development projects in the City in order to qualify for streamlining under CEQA Section 15183.5. By completing the CAP Checklist and demonstrating that a project is eligible and includes all applicable GHG measures, a project may demonstrate CAP consistency and, as a result, the project's GHG emissions impacts would be determined to be less than significant. Implementation of the CAP on a project-by-project basis should achieve reductions in GHG emissions consistent with State GHG-reducing protocols.

METHODOLOGY

As previously described, the Project is proposing a General Plan Amendment from a Public Service land use to a low-density residential land use. For the purpose of this analysis, the construction and operational GHG emissions from the Project (single family residential) are compared to the existing land use designation (that allows for an elementary school). Emissions from each scenario were modeled using the California Emissions Estimator Model (CalEEMod) software, version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects.

For the Proposed Project scenario, construction generated GHG emissions were calculated using CalEEMod model defaults for Sacramento County coupled with lot size and the number of proposed residential units. Operational GHG emissions were based on CalEEMod defaults for the Project land use. The Existing Land Use Designation scenario (i.e., an elementary school) construction generated GHG emissions were calculated using CalEEMod model defaults for Sacramento County and operational GHG emissions

calculations account for the average student enrollment of 778 students (United States News and World Report 2024) at existing elementary schools in the City of Elk Grove.

GREENHOUSE GAS EMISSIONS

Construction-Generated Greenhouse Gas Emissions

A potent source of GHG emissions associated with both the Proposed Project scenario and Existing Land Use Designation scenario would be combustion of fossil fuels during construction activities. Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). For the purposes of this analysis, the construction emissions for the Proposed Project are compared to that of the existing land use designation. See Table 1.

Table 1. Construction-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/ Year)
Existing Land Use Designation (778-Student Elementary School)	
Construction Calander Year One	330
Construction Calander Year Two	215
Total	**545**
Project Land Use Designation (56 Single Family Residential Units)	
Construction Calander Year One	315
Construction Calander Year Two	201
Total	**516**
Difference (Existing Land Use Designation - Project Land Use Designation)	
Construction Calander Year One	*-15*
Construction Calander Year Two	*-14*

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: For the Proposed Project scenario, construction generated GHG emissions were calculated using CalEEMod model defaults for Sacramento County coupled with lot size and the number of proposed residential units. The Existing Land Use Designation scenario construction generated GHG emissions were calculated using CalEEMod model defaults for Sacramento County.

As shown in Table 1, construction emissions from the Existing Land Use Designation scenario would be greater than that of the Proposed Project.

Operational-Generated Greenhouse Gas Emissions

Operation of the Proposed Project would result in an increase in GHG emissions primarily associated with motor vehicle trips to and from the Site. For the purposes of this analysis, operational emissions for the Proposed Project scenario are compared to the Existing Land Use Designation scenario. See Table 2.

Table 2. Operational-Related Greenhouse Gas Emissions	
Emissions Source	**CO_2e (Metric Tons/ Year)**
Existing Land Use Designation (778-Student Elementary School)	
Mobile Source Emissions	1,522
Area Source Emissions	1
Energy Source Emissions	138
Water Emissions	2
Solid Waste Emissions	44
Refrigeration Emissions	0
Total	**1,707**
Project Land Use Designation (56 Single Family Residential Units)	
Mobile Source Emissions	863
Area Source Emissions	1
Energy Source Emissions	178
Water Emissions	4
Solid Waste Emissions	12
Refrigeration Emissions	0
Total	**1,058**
Difference (Existing Land Use Designation - Proposed Land Use Designation)	
Mobile Source Emissions	-659
Area Source Emissions	0
Energy Source Emissions	+40
Water Emissions	+2
Solid Waste Emissions	-32
Refrigeration Emissions	0
Difference	**-649**

Source: CalEEMod version 2022.1. Refer to Attachment A for Model Data Outputs.

Notes: For the Proposed Project scenario, operational GHG emissions were based on CalEEMod defaults for the Project land use. The Existing Land Use Designation scenario, operational GHG emissions calculations employed the average student enrollment of 778 students (United States News and World Report 2024) at existing elementary schools in the City of Elk Grove.

As shown in Table 2, operational emissions for the Proposed Project scenario would be less than the Existing Land Use Designation scenario.

REFERENCES

[CARB] California Air Resources Board. 2024. California Greenhouse Gas Emission Inventory 2023 Edition. https://ww2.arb.ca.gov/ghg-inventory-data

[SMAQMD] Sacramento Metropolitan Air Quality Management District. 2020. Thresholds of Significance Table. http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

United States News and World Report. 2024. Overview of Elk Grove Unified School District. https://www.usnews.com/education/k12/california/districts/elk-grove-unified-112053

ATTACHMENT A

Greenhouse Gas Emissions Modeling Output

PROJECT LAND USE DESIGNATION CALEEMOD OUTPUTS

Milestone- Residential Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Milestone- Residential
Construction Start Date	3/3/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	36.6
Location	38.39889368865309, -121.35392507258294
County	Sacramento
City	Elk Grove
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	737
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	56.0	Dwelling Unit	10.3	109,200	655,920	0.00	157	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	51.4	51.4	31.7	31.2	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	6,826	6,826	0.27	0.06	1.33	6,852
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.45	1.21	10.9	14.1	0.02	0.43	0.25	0.68	0.40	0.06	0.46	—	2,774	2,774	0.11	0.05	0.03	2,793
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.42	3.32	7.92	9.23	0.02	0.32	1.42	1.74	0.30	0.61	0.90	—	1,890	1,890	0.08	0.03	0.28	1,900
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.62	0.61	1.44	1.68	< 0.005	0.06	0.26	0.32	0.05	0.11	0.17	—	313	313	0.01	< 0.005	0.05	315

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.02	3.38	31.7	31.2	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	6,826	6,826	0.27	0.06	1.33	6,852
2026	51.4	51.4	10.2	14.2	0.02	0.38	0.25	0.63	0.35	0.06	0.41	—	2,791	2,791	0.11	0.05	1.21	2,811
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.45	1.21	10.9	14.1	0.02	0.43	0.25	0.68	0.40	0.06	0.46	—	2,774	2,774	0.11	0.05	0.03	2,793
2026	1.37	1.15	10.2	13.9	0.02	0.38	0.25	0.63	0.35	0.06	0.41	—	2,766	2,766	0.11	0.05	0.03	2,785
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.05	0.88	7.92	9.23	0.02	0.32	1.42	1.74	0.30	0.61	0.90	—	1,890	1,890	0.08	0.03	0.28	1,900
2026	3.42	3.32	4.52	6.21	0.01	0.17	0.11	0.28	0.16	0.03	0.18	—	1,207	1,207	0.05	0.02	0.23	1,215
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.19	0.16	1.44	1.68	< 0.005	0.06	0.26	0.32	0.05	0.11	0.17	—	313	313	0.01	< 0.005	0.05	315
2026	0.62	0.61	0.83	1.13	< 0.005	0.03	0.02	0.05	0.03	< 0.005	0.03	—	200	200	0.01	< 0.005	0.04	201

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.60	5.31	2.91	27.4	0.06	0.09	4.74	4.83	0.08	1.21	1.29	24.1	6,733	6,757	2.30	0.23	18.6	6,902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	4.81	3.29	20.0	0.05	0.08	4.74	4.83	0.08	1.21	1.29	24.1	6,235	6,259	2.32	0.25	1.25	6,394

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.23	4.95	3.08	21.7	0.05	0.08	4.53	4.61	0.08	1.15	1.23	24.1	6,225	6,249	2.31	0.24	8.32	6,386
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.95	0.90	0.56	3.96	0.01	0.02	0.83	0.84	0.01	0.21	0.22	3.99	1,031	1,035	0.38	0.04	1.38	1,057

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.62	2.38	2.32	24.0	0.06	0.04	4.74	4.78	0.04	1.21	1.24	—	5,636	5,636	0.22	0.22	17.9	5,725
Area	2.91	2.90	0.03	3.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	8.49	8.49	< 0.005	< 0.005	—	8.52
Energy	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,071	1,071	0.08	< 0.005	—	1,074
Water	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Waste	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	5.60	5.31	2.91	27.4	0.06	0.09	4.74	4.83	0.08	1.21	1.29	24.1	6,733	6,757	2.30	0.23	18.6	6,902
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.40	2.16	2.73	19.8	0.05	0.04	4.74	4.78	0.04	1.21	1.24	—	5,147	5,147	0.24	0.24	0.46	5,225
Area	2.62	2.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,071	1,071	0.08	< 0.005	—	1,074
Water	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Waste	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78

Total	5.08	4.81	3.29	20.0	0.05	0.08	4.74	4.83	0.08	1.21	1.29	24.1	6,235	6,259	2.32	0.25	1.25	6,394
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.34	2.11	2.50	19.3	0.05	0.04	4.53	4.57	0.04	1.15	1.19	—	5,131	5,131	0.22	0.22	7.54	5,212
Area	2.82	2.81	0.02	2.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	5.82	5.82	< 0.005	< 0.005	—	5.84
Energy	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,071	1,071	0.08	< 0.005	—	1,074
Water	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Waste	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	5.23	4.95	3.08	21.7	0.05	0.08	4.53	4.61	0.08	1.15	1.23	24.1	6,225	6,249	2.31	0.24	8.32	6,386
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.43	0.39	0.46	3.52	0.01	0.01	0.83	0.83	0.01	0.21	0.22	—	850	850	0.04	0.04	1.25	863
Area	0.51	0.51	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.96	0.96	< 0.005	< 0.005	—	0.97
Energy	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	177	177	0.01	< 0.005	—	178
Water	—	—	—	—	—	—	—	—	—	—	—	0.70	2.83	3.53	< 0.005	< 0.005	—	4.06
Waste	—	—	—	—	—	—	—	—	—	—	—	3.29	0.00	3.29	0.33	0.00	—	11.5
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.95	0.90	0.56	3.96	0.01	0.02	0.83	0.84	0.01	0.21	0.22	3.99	1,031	1,035	0.38	0.04	1.38	1,057

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

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

Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	1.05	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.76	202

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.96	4.96	< 0.005	< 0.005	0.01	5.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.44	2.33	0.01	0.10	—	0.10	0.09	—	0.09	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.21	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	227	227	< 0.005	0.01	0.87	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.0	17.0	< 0.005	< 0.005	0.03	17.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	0.01	2.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.44	5.54	0.01	0.18	—	0.18	0.17	—	0.17	—	1,018	1,018	0.04	0.01	—	1,022

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.81	1.01	< 0.005	0.03	—	0.03	0.03	—	0.03	—	169	169	0.01	< 0.005	—	169
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	1.22	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	229	229	< 0.005	0.01	0.88	232
Vendor	0.02	0.01	0.31	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	173	173	0.01	0.03	0.45	182
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	0.89	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	206
Vendor	0.02	0.01	0.34	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	173	173	0.01	0.03	0.01	181
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.39	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	88.5	88.5	< 0.005	< 0.005	0.16	89.8
Vendor	0.01	< 0.005	0.14	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.5	73.5	< 0.005	0.01	0.08	77.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.03	14.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.01	12.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.93	5.18	0.01	0.15	—	0.15	0.14	—	0.14	—	957	957	0.04	0.01	—	960
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.94	< 0.005	0.03	—	0.03	0.03	—	0.03	—	158	158	0.01	< 0.005	—	159
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	1.14	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	< 0.005	0.01	0.80	228
Vendor	0.02	0.01	0.29	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	170	170	0.01	0.03	0.41	178
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.84	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	< 0.005	0.01	0.02	202
Vendor	0.02	0.01	0.31	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	170	170	0.01	0.03	0.01	177
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.6	81.6	< 0.005	< 0.005	0.14	82.8
Vendor	0.01	< 0.005	0.12	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	67.7	67.7	< 0.005	0.01	0.07	70.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	13.7
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.01	11.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

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

Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.39	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.85	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.60	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.34	8.34	< 0.005	< 0.005	0.01	8.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	51.3	51.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	2.81	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.51	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.9	44.9	< 0.005	< 0.005	0.16	45.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.24	2.24	< 0.005	< 0.005	< 0.005	2.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.62	2.38	2.32	24.0	0.06	0.04	4.74	4.78	0.04	1.21	1.24	—	5,636	5,636	0.22	0.22	17.9	5,725
Total	2.62	2.38	2.32	24.0	0.06	0.04	4.74	4.78	0.04	1.21	1.24	—	5,636	5,636	0.22	0.22	17.9	5,725
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.40	2.16	2.73	19.8	0.05	0.04	4.74	4.78	0.04	1.21	1.24	—	5,147	5,147	0.24	0.24	0.46	5,225
Total	2.40	2.16	2.73	19.8	0.05	0.04	4.74	4.78	0.04	1.21	1.24	—	5,147	5,147	0.24	0.24	0.46	5,225
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.43	0.39	0.46	3.52	0.01	0.01	0.83	0.83	0.01	0.21	0.22	—	850	850	0.04	0.04	1.25	863
Total	0.43	0.39	0.46	3.52	0.01	0.01	0.83	0.83	0.01	0.21	0.22	—	850	850	0.04	0.04	1.25	863

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.02	< 0.005	—	366
Total	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.02	< 0.005	—	366
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.02	< 0.005	—	366
Total	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.02	< 0.005	—	366
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	60.4	60.4	< 0.005	< 0.005	—	60.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	60.4	60.4	< 0.005	< 0.005	—	60.6

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	706	706	0.06	< 0.005	—	708

Total	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	706	706	0.06	< 0.005	—	708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	706	706	0.06	< 0.005	—	708
Total	0.07	0.03	0.56	0.24	< 0.005	0.04	—	0.04	0.04	—	0.04	—	706	706	0.06	< 0.005	—	708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	117	117	0.01	< 0.005	—	117
Total	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	117	117	0.01	< 0.005	—	117

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	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	2.34	2.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.29	0.28	0.03	3.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.49	8.49	< 0.005	< 0.005	—	8.52

Total	2.91	2.90	0.03	3.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	8.49	8.49	< 0.005	< 0.005	—	8.52
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	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	2.34	2.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.28	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.62	2.62	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	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	0.43	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.04	0.03	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.96	0.96	< 0.005	< 0.005	—	0.97
Total	0.51	0.51	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.96	0.96	< 0.005	< 0.005	—	0.97

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Total	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Total	—	—	—	—	—	—	—	—	—	—	—	4.22	17.1	21.3	0.02	0.01	—	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.70	2.83	3.53	< 0.005	< 0.005	—	4.06
Total	—	—	—	—	—	—	—	—	—	—	—	0.70	2.83	3.53	< 0.005	< 0.005	—	4.06

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Total	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Total	—	—	—	—	—	—	—	—	—	—	—	19.9	0.00	19.9	1.99	0.00	—	69.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.29	0.00	3.29	0.33	0.00	—	11.5
Total	—	—	—	—	—	—	—	—	—	—	—	3.29	0.00	3.29	0.33	0.00	—	11.5

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.78	0.78

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2025	4/15/2025	5.00	10.0	—
Grading	Grading	4/16/2025	5/28/2025	5.00	30.0	—
Building Construction	Building Construction	5/29/2025	7/23/2026	5.00	300	—
Paving	Paving	7/24/2026	8/21/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	8/22/2026	9/19/2026	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

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

Building Construction	Worker	20.2	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	5.99	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	4.03	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	221,130	73,710	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.62

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.62	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	295	0.01	< 0.005
2026	0.00	279	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	529	534	479	190,647	6,618	6,688	5,994	2,386,796

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	56
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
221130	73,710	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	498,860	267	0.0129	0.0017	2,202,544

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,974,504	11,196,539

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	36.9	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.0	annual days of extreme heat
Extreme Precipitation	4.80	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.0
AQ-PM	34.8
AQ-DPM	46.5
Drinking Water	41.6
Lead Risk Housing	42.8
Pesticides	54.8
Toxic Releases	19.7
Traffic	64.8
Effect Indicators	—
CleanUp Sites	4.12
Groundwater	22.1
Haz Waste Facilities/Generators	84.8
Impaired Water Bodies	12.5
Solid Waste	35.7
Sensitive Population	—
Asthma	45.8
Cardio-vascular	79.3
Low Birth Weights	60.3
Socioeconomic Factor Indicators	—

Education	37.3
Housing	40.3
Linguistic	8.49
Poverty	54.5
Unemployment	11.9

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	65.31502631
Employed	83.80597973
Median HI	56.69190299
Education	—
Bachelor's or higher	34.96727833
High school enrollment	100
Preschool enrollment	13.49929424
Transportation	—
Auto Access	46.0284871
Active commuting	66.46990889
Social	—
2-parent households	68.29205697
Voting	78.13422302
Neighborhood	—
Alcohol availability	64.32696009
Park access	59.96407032
Retail density	38.5730784

Supermarket access	18.65776979
Tree canopy	84.11394842
Housing	—
Homeownership	59.50211728
Housing habitability	72.71910689
Low-inc homeowner severe housing cost burden	38.86821506
Low-inc renter severe housing cost burden	84.02412421
Uncrowded housing	42.30719877
Health Outcomes	—
Insured adults	60.5800077
Arthritis	28.3
Asthma ER Admissions	47.5
High Blood Pressure	40.5
Cancer (excluding skin)	27.6
Asthma	32.2
Coronary Heart Disease	47.4
Chronic Obstructive Pulmonary Disease	35.3
Diagnosed Diabetes	68.9
Life Expectancy at Birth	23.5
Cognitively Disabled	30.7
Physically Disabled	22.7
Heart Attack ER Admissions	28.3
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	44.9
Pedestrian Injuries	19.6
Physical Health Not Good	54.5

Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	15.4
Current Smoker	32.2
No Leisure Time for Physical Activity	68.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	42.6
English Speaking	71.1
Foreign-born	17.6
Outdoor Workers	45.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	60.3
Traffic Density	49.1
Traffic Access	23.0
Other Indices	—
Hardship	48.5
Other Decision Support	—
2016 Voting	66.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	45.0
Healthy Places Index Score for Project Location (b)	63.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Lot acreage updated to match that of the Project.
Construction: Construction Phases	Project site is vacant. No demolition needed.

EXISTING LAND USE DESIGNATION CALEEMOD OUTPUTS

Milestone- School Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Milestone- School
Construction Start Date	3/3/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	36.6
Location	38.39889368865309, -121.35392507258294
County	Sacramento
City	Elk Grove
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	737
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Elementary School	778	Student	10.3	65,043	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	22.8	22.8	31.7	31.2	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	6,826	6,826	0.27	0.08	1.99	6,852
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	1.24	11.1	14.5	0.03	0.44	0.36	0.79	0.40	0.09	0.49	—	2,981	2,981	0.12	0.08	0.05	3,007
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.86	1.76	8.04	9.40	0.02	0.32	1.46	1.79	0.30	0.62	0.92	—	1,978	1,978	0.08	0.04	0.40	1,992
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.32	1.47	1.72	< 0.005	0.06	0.27	0.33	0.05	0.11	0.17	—	328	328	0.01	0.01	0.07	330

2.2. Construction Emissions by Year, Unmitigated

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

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

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.02	3.38	31.7	31.2	0.06	1.37	19.8	21.2	1.26	10.1	11.4	—	6,826	6,826	0.27	0.08	1.99	6,852
2026	22.8	22.8	10.4	14.7	0.03	0.38	0.36	0.74	0.35	0.09	0.44	—	3,003	3,003	0.12	0.08	1.81	3,031
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.49	1.24	11.1	14.5	0.03	0.44	0.36	0.79	0.40	0.09	0.49	—	2,981	2,981	0.12	0.08	0.05	3,007
2026	1.41	1.18	10.5	14.3	0.03	0.38	0.36	0.74	0.35	0.09	0.44	—	2,969	2,969	0.12	0.08	0.05	2,995
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.06	0.89	8.04	9.40	0.02	0.32	1.46	1.79	0.30	0.62	0.92	—	1,978	1,978	0.08	0.04	0.40	1,992
2026	1.86	1.76	4.63	6.37	0.01	0.17	0.15	0.32	0.16	0.04	0.19	—	1,290	1,290	0.05	0.03	0.33	1,301
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.19	0.16	1.47	1.72	< 0.005	0.06	0.27	0.33	0.05	0.11	0.17	—	328	328	0.01	0.01	0.07	330
2026	0.34	0.32	0.84	1.16	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04	—	214	214	0.01	0.01	0.05	215

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.98	8.34	6.16	62.0	0.14	0.13	11.4	11.5	0.12	2.90	3.02	80.6	14,448	14,528	8.27	0.55	43.2	14,943
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.87	7.25	7.14	49.6	0.12	0.12	11.4	11.5	0.12	2.90	3.02	80.6	13,260	13,340	8.33	0.60	1.37	13,730

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.41	5.94	4.92	37.1	0.09	0.10	7.97	8.07	0.10	2.02	2.12	80.6	9,892	9,972	8.13	0.42	13.5	10,313
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.17	1.08	0.90	6.77	0.02	0.02	1.45	1.47	0.02	0.37	0.39	13.3	1,638	1,651	1.35	0.07	2.24	1,708

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.92	6.34	5.74	58.8	0.13	0.09	11.4	11.5	0.09	2.90	2.99	—	13,601	13,601	0.55	0.54	43.0	13,819
Area	2.02	1.98	0.02	2.83	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.7
Energy	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	831	831	0.06	< 0.005	—	834
Water	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Waste	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	8.98	8.34	6.16	62.0	0.14	0.13	11.4	11.5	0.12	2.90	3.02	80.6	14,448	14,528	8.27	0.55	43.2	14,943
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.31	5.71	6.75	49.3	0.12	0.09	11.4	11.5	0.09	2.90	2.99	—	12,425	12,425	0.61	0.59	1.11	12,618
Area	1.52	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	831	831	0.06	< 0.005	—	834
Water	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Waste	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25

Total	7.87	7.25	7.14	49.6	0.12	0.12	11.4	11.5	0.12	2.90	3.02	80.6	13,260	13,340	8.33	0.60	1.37	13,730
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.51	4.09	4.51	34.8	0.09	0.07	7.97	8.03	0.06	2.02	2.09	—	9,049	9,049	0.41	0.40	13.3	9,193
Area	1.86	1.83	0.02	1.94	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.97	7.97	< 0.005	< 0.005	—	8.00
Energy	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	831	831	0.06	< 0.005	—	834
Water	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Waste	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	6.41	5.94	4.92	37.1	0.09	0.10	7.97	8.07	0.10	2.02	2.12	80.6	9,892	9,972	8.13	0.42	13.5	10,313
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.82	0.75	0.82	6.36	0.02	0.01	1.45	1.47	0.01	0.37	0.38	—	1,498	1,498	0.07	0.07	2.19	1,522
Area	0.34	0.33	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.32	1.32	< 0.005	< 0.005	—	1.32
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	138	138	0.01	< 0.005	—	138
Water	—	—	—	—	—	—	—	—	—	—	—	0.67	0.62	1.28	< 0.005	< 0.005	—	1.78
Waste	—	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	1.17	1.08	0.90	6.77	0.02	0.02	1.45	1.47	0.02	0.37	0.39	13.3	1,638	1,651	1.35	0.07	2.24	1,708

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

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

Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.87	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	1.05	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	199	199	< 0.005	0.01	0.76	202

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.96	4.96	< 0.005	< 0.005	0.01	5.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.44	2.33	0.01	0.10	—	0.10	0.09	—	0.09	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.21	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	227	227	< 0.005	0.01	0.87	230
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.0	17.0	< 0.005	< 0.005	0.03	17.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	0.01	2.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.48	4.44	5.54	0.01	0.18	—	0.18	0.17	—	0.17	—	1,018	1,018	0.04	0.01	—	1,022

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.81	1.01	< 0.005	0.03	—	0.03	0.03	—	0.03	—	169	169	0.01	< 0.005	—	169
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.08	1.65	0.00	0.00	0.28	0.28	0.00	0.06	0.06	—	310	310	< 0.005	0.01	1.19	315
Vendor	0.03	0.01	0.56	0.21	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.80	323
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.21	0.00	0.00	0.28	0.28	0.00	0.06	0.06	—	275	275	0.01	0.01	0.03	279
Vendor	0.03	0.01	0.60	0.21	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.02	322
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.53	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	120	120	< 0.005	< 0.005	0.22	122
Vendor	0.01	0.01	0.25	0.09	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	131	131	0.01	0.02	0.15	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.9	19.9	< 0.005	< 0.005	0.04	20.1
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.7	21.7	< 0.005	< 0.005	0.02	22.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.93	5.18	0.01	0.15	—	0.15	0.14	—	0.14	—	957	957	0.04	0.01	—	960
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.72	0.94	< 0.005	0.03	—	0.03	0.03	—	0.03	—	158	158	0.01	< 0.005	—	159
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.07	1.54	0.00	0.00	0.28	0.28	0.00	0.06	0.06	—	304	304	< 0.005	0.01	1.09	308
Vendor	0.03	0.01	0.52	0.20	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	302	302	0.02	0.05	0.73	317
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.09	1.13	0.00	0.00	0.28	0.28	0.00	0.06	0.06	—	270	270	0.01	0.01	0.03	273
Vendor	0.03	0.01	0.56	0.20	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	302	302	0.02	0.05	0.02	316
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	111	111	< 0.005	< 0.005	0.19	112
Vendor	0.01	< 0.005	0.22	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.13	126
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.03	18.6
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.0	20.0	< 0.005	< 0.005	0.02	20.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

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

Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.39	0.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.04	0.85	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.60	169
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.34	8.34	< 0.005	< 0.005	0.01	8.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	22.6	22.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	1.24	1.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.23	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.31	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	60.8	60.8	< 0.005	< 0.005	0.22	61.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.04	3.04	< 0.005	< 0.005	0.01	3.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	6.92	6.34	5.74	58.8	0.13	0.09	11.4	11.5	0.09	2.90	2.99	—	13,601	13,601	0.55	0.54	43.0	13,819
Total	6.92	6.34	5.74	58.8	0.13	0.09	11.4	11.5	0.09	2.90	2.99	—	13,601	13,601	0.55	0.54	43.0	13,819
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	6.31	5.71	6.75	49.3	0.12	0.09	11.4	11.5	0.09	2.90	2.99	—	12,425	12,425	0.61	0.59	1.11	12,618
Total	6.31	5.71	6.75	49.3	0.12	0.09	11.4	11.5	0.09	2.90	2.99	—	12,425	12,425	0.61	0.59	1.11	12,618
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.82	0.75	0.82	6.36	0.02	0.01	1.45	1.47	0.01	0.37	0.38	—	1,498	1,498	0.07	0.07	2.19	1,522
Total	0.82	0.75	0.82	6.36	0.02	0.01	1.45	1.47	0.01	0.37	0.38	—	1,498	1,498	0.07	0.07	2.19	1,522

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	363	363	0.02	< 0.005	—	364
Total	—	—	—	—	—	—	—	—	—	—	—	—	363	363	0.02	< 0.005	—	364
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	363	363	0.02	< 0.005	—	364
Total	—	—	—	—	—	—	—	—	—	—	—	—	363	363	0.02	< 0.005	—	364
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	60.1	60.1	< 0.005	< 0.005	—	60.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	60.1	60.1	< 0.005	< 0.005	—	60.2

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470

Total	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470
Total	0.04	0.02	0.39	0.33	< 0.005	0.03	—	0.03	0.03	—	0.03	—	469	469	0.04	< 0.005	—	470
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	77.6	77.6	0.01	< 0.005	—	77.8
Total	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	77.6	77.6	0.01	< 0.005	—	77.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.39	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.50	0.46	0.02	2.83	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.7
Total	2.02	1.98	0.02	2.83	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.6	11.6	< 0.005	< 0.005	—	11.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.39	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.52	1.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.25	0.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.32	1.32	< 0.005	< 0.005	—	1.32
Total	0.34	0.33	< 0.005	0.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.32	1.32	< 0.005	< 0.005	—	1.32

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Elementary School	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Total	—	—	—	—	—	—	—	—	—	—	—	4.03	3.73	7.76	0.01	0.01	—	10.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.67	0.62	1.28	< 0.005	< 0.005	—	1.78
Total	—	—	—	—	—	—	—	—	—	—	—	0.67	0.62	1.28	< 0.005	< 0.005	—	1.78

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Element School	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Total	—	—	—	—	—	—	—	—	—	—	—	76.5	0.00	76.5	7.65	0.00	—	268
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.3
Total	—	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.25	0.25
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2025	4/15/2025	5.00	10.0	—
Grading	Grading	4/16/2025	5/28/2025	5.00	30.0	—
Building Construction	Building Construction	5/29/2025	7/23/2026	5.00	300	—
Paving	Paving	7/24/2026	8/21/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	8/22/2026	9/19/2026	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	27.3	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	10.7	8.80	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.46	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	97,565	32,522	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	15.0	0.00	—

Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	295	0.01	< 0.005
2026	0.00	279	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	1,470	0.00	0.00	383,359	16,101	0.00	0.00	4,197,697

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	97,565	32,522	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Elementary School	495,858	267	0.0129	0.0017	1,462,023

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	1,886,059	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)

Elementary School	142	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	20.0	annual days of extreme heat

Extreme Precipitation	4.80	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

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

6.2. Initial Climate Risk Scores

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

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.0
AQ-PM	34.8
AQ-DPM	46.5
Drinking Water	41.6
Lead Risk Housing	42.8
Pesticides	54.8

Toxic Releases	19.7
Traffic	64.8
Effect Indicators	—
CleanUp Sites	4.12
Groundwater	22.1
Haz Waste Facilities/Generators	84.8
Impaired Water Bodies	12.5
Solid Waste	35.7
Sensitive Population	—
Asthma	45.8
Cardio-vascular	79.3
Low Birth Weights	60.3
Socioeconomic Factor Indicators	—
Education	37.3
Housing	40.3
Linguistic	8.49
Poverty	54.5
Unemployment	11.9

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	65.31502631
Employed	83.80597973
Median HI	56.69190299
Education	—

Bachelor's or higher	34.96727833
High school enrollment	100
Preschool enrollment	13.49929424
Transportation	—
Auto Access	46.0284871
Active commuting	66.46990889
Social	—
2-parent households	68.29205697
Voting	78.13422302
Neighborhood	—
Alcohol availability	64.32696009
Park access	59.96407032
Retail density	38.5730784
Supermarket access	18.65776979
Tree canopy	84.11394842
Housing	—
Homeownership	59.50211728
Housing habitability	72.71910689
Low-inc homeowner severe housing cost burden	38.86821506
Low-inc renter severe housing cost burden	84.02412421
Uncrowded housing	42.30719877
Health Outcomes	—
Insured adults	60.5800077
Arthritis	28.3
Asthma ER Admissions	47.5
High Blood Pressure	40.5
Cancer (excluding skin)	27.6

Asthma	32.2
Coronary Heart Disease	47.4
Chronic Obstructive Pulmonary Disease	35.3
Diagnosed Diabetes	68.9
Life Expectancy at Birth	23.5
Cognitively Disabled	30.7
Physically Disabled	22.7
Heart Attack ER Admissions	28.3
Mental Health Not Good	47.3
Chronic Kidney Disease	64.9
Obesity	44.9
Pedestrian Injuries	19.6
Physical Health Not Good	54.5
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	15.4
Current Smoker	32.2
No Leisure Time for Physical Activity	68.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	42.6
English Speaking	71.1
Foreign-born	17.6
Outdoor Workers	45.5
Climate Change Adaptive Capacity	—

Impervious Surface Cover	60.3
Traffic Density	49.1
Traffic Access	23.0
Other Indices	—
Hardship	48.5
Other Decision Support	—
2016 Voting	66.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	45.0
Healthy Places Index Score for Project Location (b)	63.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Land Use	Lot acreage updated to match that of the Project.
Construction: Construction Phases	Project site is vacant. No demolition needed.

APPENDIX B

SMAQMD MINOR PROJECT HEALTH EFFECTS TOOL

Minor Project Health Effects Tool

Latitude	38.39894457	**<-- Step 1: Input latitude (Please chose a value between 38.0 and 39.7)**
Longitude	-121.345697	**<-- Step 2: Input longitude (Please chose a value between -122.5 and -120.0)**

PM2.5 Health Endpoint	Age Range[1]	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year)[2,5] (Mean)	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year)[2] (Mean)	Percent of Background Health Incidences Across the 5-Air-District Region[3]	Total Number of Health Incidences Across the 5-Air-District Region (per year)[4]
Respiratory					
Emergency Room Visits, Asthma	0 - 99	0.80	0.73	0.0039%	18419
Hospital Admissions, Asthma	0 - 64	0.053	0.048	0.0026%	1846
Hospital Admissions, All Respiratory	65 - 99	0.25	0.22	0.0011%	19644
Cardiovascular					
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.14	0.12	0.00051%	24037
Acute Myocardial Infarction, Nonfatal	18 - 24	0.000066	0.000059	0.0016%	4
Acute Myocardial Infarction, Nonfatal	25 - 44	0.0059	0.0055	0.0018%	308
Acute Myocardial Infarction, Nonfatal	45 - 54	0.015	0.014	0.0019%	741
Acute Myocardial Infarction, Nonfatal	55 - 64	0.024	0.022	0.0018%	1239
Acute Myocardial Infarction, Nonfatal	65 - 99	0.086	0.078	0.0016%	5052
Mortality					
Mortality, All Cause	30 - 99	1.6	1.5	0.0032%	44766

Ozone Health Endpoint	Age Range[1]	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year)[2,5] (Mean)	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year)[2] (Mean)	Percent of Background Health Incidences Across the 5-Air-District Region[3]	Total Number of Health Incidences Across the 5-Air-District Region (per year)[4]
Respiratory					
Hospital Admissions, All Respiratory	65 - 99	0.054	0.042	0.00021%	19644
Emergency Room Visits, Asthma	0 - 17	0.27	0.22	0.0038%	5859
Emergency Room Visits, Asthma	18 - 99	0.42	0.35	0.0028%	12560
Mortality					
Mortality, Non-Accidental	0 - 99	0.033	0.027	0.000089%	30386

1. Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.

2. Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects are shown for the Reduced Sacramento 4-km Modeling Domain and the 5-Air-District Region.

3. The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, the background incidence rates cover the 5-Air-District Region (estimated 2035 population of 3,271,451 persons). Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.

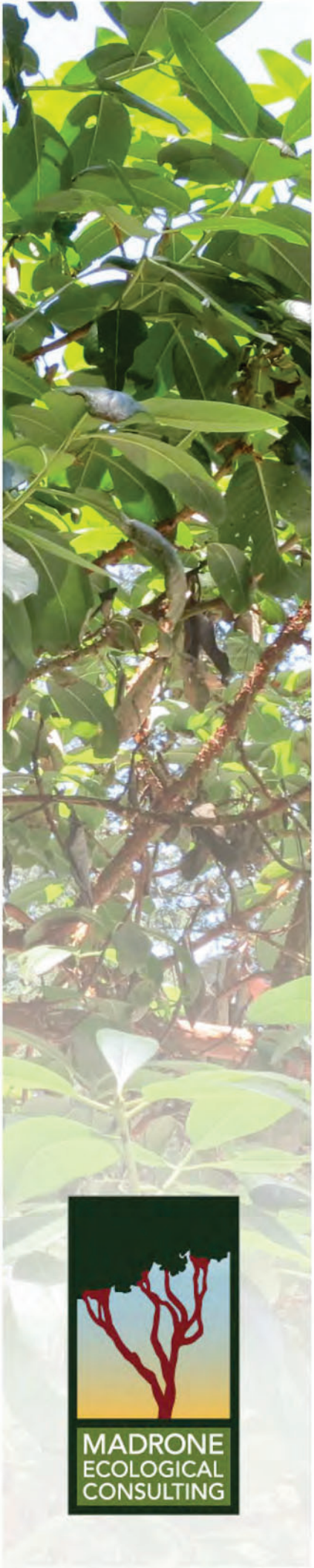
4. The total number of health incidences across the 5-Air-District Region is calculated based on the modeling data. The information is presented to assist in providing overall health context.

5. The technical specifications and map for the Reduced Sacramento 4-km Modeling Domain are included in Appendix A, Table A-1 and Appendix B, Figure B-2 of the *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District.*

Sac Metro Air District Minor Project Health Effects Tool, version 2, published June 2020

APPENDIX C

BIOLOGICAL RESOURCES ASSESSMENT



Biological Resources Assessment

Milestone II

Elk Grove, Sacramento County, California

June 2025

MADRONE ECOLOGICAL CONSULTING

Prepared for:
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Attachment A. Preliminary Site Plan
Attachment B. IPaC Trust Resource Report for the Study Area

Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Elk Grove, California" USGS Quadrangle and Eight Surrounding Quadrangles

Attachment D. Nationwide Permit Authorization for Crooked Creek Estates East

Attachment E. Swainson's Hawk Foraging Habitat Mitigation Conservation Easement

1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) conducted for Milestone II (Project). The Project site is referred to throughout this document as the Study Area. The Study Area is one of the last remaining unbuilt blocks of the previously permitted Crooked Creek East residential project. The 9.9-acre Study Area is located at the northwest corner of Wayne Heintz Street and Wyland Drive in the City of Elk Grove, Sacramento County, California (**Figure 1**). The Study Area is located in a portion of Section 5, Township 6 North, Range 6 East (MDB&M) as shown on the "Elk Grove, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2022).

This document has been prepared to support the City of Elk Grove's (City's) California Environmental Quality Act (CEQA) review of a General Plan Amendment and rezone for the proposed Project.

1.1 Project Description

The Project is a 56 unit residential development project. A preliminary site plan is included as **Attachment A**.

2.0 REGULATORY SETTING

This section describes federal, state, and local laws and policies that are relevant to this assessment of biological resources.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed wildlife species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take." In addition, FESA prohibits malicious damage or destruction of listed plant species on federal lands or in association with federal actions, and the removal, cutting, digging up, damage, or destruction of listed plant species in violation of state law. FESA does not afford any protections to federally listed plant species that are not also included on a state endangered species list on private lands with no associated federal action.

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of dredged or fill material into waters of the United States, including some wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. As of the date of this document, waters of the United States (waters of the U.S.) are defined as follows (40 CFR 120.2):

1. Waters which are:
    i. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    ii. The territorial seas; or
    iii. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under item (5) below;
3. Tributaries of waters identified in items (1) or (2) above that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    i. Waters identified in item (1) of this section; or
    ii. Relatively permanent, standing or continuously flowing bodies of water identified in items (2) or (3) above and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in items (1) or (3) above.

Under the current definition of waters of the U.S., "adjacent" means *having a continuous surface connection*. Waters subject to regulation under Section 404 are referred to as "jurisdictional waters".

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg,

unless allowed by permit [16 USC 668(a); 50 CFR 22]. The U.S. Fish and Wildlife Service (USFWS) may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

2.2 State Regulations

2.2.1 California Environmental Quality Act

CEQA requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the USFWS (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by CDFW as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g. tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e., that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish and Game Code Section 2081).

2.2.3 California Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to

those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code, § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.4 California Species of Special Concern

The Species of Special Concern (CSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered or meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

CSC are typically associated with habitats that are threatened. Project-related impacts to CSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.6 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and

wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.7 California Water Code, Porter-Cologne Act

Waters that are not considered waters of the U.S. may be considered waters of the State of California (waters of the state) under the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state of California. Wetlands that are waters of the state include natural wetlands; wetlands created by modification of a surface water of the state; and artificial wetlands that meet specific criteria.

2.2.8 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1600, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The California Code of Regulations defines a river or stream thusly: "A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (CCR Title 14, Section 1.72). For the purposes of Section 1600, rivers, streams, and lakes include those that are dry for periods of time as well as those that flow year round. If notification is required and CDFW believes the proposed activity is likely to substantially adversely affect fish and wildlife resources, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.9 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.3 Local Regulations

2.3.1 City of Elk Grove General Plan

The City of Elk Grove (City) General Plan (last updated in 2021) contains a number of open-space and conservation related policies, including policies that address the location and uses of open space areas, special status species habitat preservation, wildlife movement, stream buffer zones, wetland and riparian area avoidance, tree preservation, and maintenance of water quality. The General Plan states that development should preserve and enhance natural areas that serve, or may potentially serve, as habitat for special-status species and that unavoidable impacts must be mitigated (Policy NR-1-2); retain movement corridor(s) adequate (both in size and in habitat quality) to allow for the continued wildlife use based on the species anticipated in the corridor (Policy NR-1.2b); avoid impacts to wetlands, vernal pools, marshland, and riparian (streamside) areas unless shown to be technically infeasible and ensure that no net loss of wetland areas occurs (Policy NR-1-4); preserve large native oak and other native tree species as well as large non-native tree species that are an important part of the City's historic and aesthetic character (Policy NR-2-1); and integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion (Policy NR-3-2).

2.3.2 City of Elk Grove Tree Preservation and Protection

The City has adopted regulations for the preservation and protection of certain trees within the City limits (Municipal Code Chapter 19.12). The City's adopted regulations apply to four types of trees as follows (referred to as "Protected Trees" throughout the remainder of this document):

- Landmark trees, which are trees specifically identified for protection by the Elk Grove City Council;
- Trees of local importance, which are trees of the following varieties that are greater than six inches in diameter:
  - Coast live oak (*Quercus agrifolia*);
  - Valley oak (*Quercus lobata*);
  - Blue oak (*Quercus douglasii*);
  - Interior live oak (*Quercus wislizenii*);
  - Oracle oak (*Quercus x moreha*);
  - California sycamore (*Platanus racemosa*); and
  - California black walnut (*Juglans hindsii*).
- Secured trees, which are trees that were mitigation for, or protected as part of, the development process for residential subdivisions and commercial developments; and
- Trees on City property or in the public right-of-way and that are landmark trees, trees of local importance, or secured trees.

A tree permit must be secured from the City prior to removal (or other work) on Protected Trees.

2.3.3 City of Elk Grove Swainson's Hawk Code

In 2003, the City established and adopted Chapter 16.130 of the Elk Grove Municipal Code (Swainson's Hawk Code) to provide options for mitigating a project's impacts to Swainson's hawk foraging habitat. Chapter 16.130 applies to projects that would subdivide parcels five (5) acres and larger zoned for agricultural uses. Chapter 16.130 outlines potential compensatory mitigation for projects that must comply with the Swainson's Hawk Code.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by utilizing the following publicly available information sources:

- California Natural Diversity Database (CNDDB) (CNDDB 2025) query of the Study Area and all areas within 5 miles of the Study Area (**Figure 2**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2025) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2025) query of the "Elk Grove, California" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**);
- Verified records from Bumble Bee Watch (BBW 2025);
- Western Monarch Milkweed Mapper (WMMM) [Western Monarch and Milkweed Occurrence Database (WMMOD) 2025] and Western Monarch Overwintering Site Viewer (Xerces Society 2025) records;
- Research grade observations from iNaturalist (iNaturalist 2025);
- Confirmed nesting records and observation records from Cornell Laboratory of Ornithology's eBird database (Cornell Lab 2025); and
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2025).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above information sources were also analyzed for their potential to occur within the Study Area.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG (WBWG 2025); and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:

- CRPR 1A: Plants presumed extinct.
- CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
- CRPR 2A: Plants extirpated in California, but common elsewhere.
- CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
- CRPR 3: Plants about which the CNPS needs more information – a review list.

3.2 Field Surveys

Madrone Ecological Consulting (Madrone) biologist Daria Snider conducted reconnaissance-level site visits of the Study Area on 28 October 2024 and 22 January 2025. During her site visits, Ms. Snider mapped vegetation communities, evaluated the presence of and mapped potential aquatic resources, and generally evaluated habitat conditions in the Study Area.

3.3 Prior Documentation

As noted above, the Study Area is located within the previously permitted Crooked Creek East Project. A number of reports and permits were prepared/obtained for the Crooked Creek East Project, are applicable to this site, and were reviewed in preparation of this document. These include:

- *Crooked Creek East Nationwide Permit Authorization* (**Attachment D**),
- *Listed Vernal Pool Branchiopod Wet Season Survey 90-Day Report Melavic Property* (Gibson & Skordal 2008),
- *Dry-Season Sampling for Federally Listed Large Branchiopods at the Crooked Creek Project, Elk Grove, Sacramento County, California* (Helm Biological Consulting 2016),
- *2016 – 2017 Wet-Season Branchiopod Survey 90-Day Report Crooked Creek Properties* (Madrone 2017), and
- *Mitigated Negative Declaration/Initial Environmental Study for Crooked Creek Estates* (City of Elk Grove 2004) (MND/IS).

4.0 EXISTING CONDITIONS

The Study Area is a graded lot occupied by non-native annual grassland. Interspersed across the site are a number of residual stockpiles, divots from heavy equipment excavation, and relict roadways. This property was fully graded and used as a staging area for construction of the surrounding development in 2018 (**Figure 3**), and evidence of this activity is visible throughout the Study Area.

The Study Area is situated at approximately 50 feet above mean sea level. It is bounded to the south and east by concrete sidewalks adjacent to Wayne Heintz Street and Wyland Drive and is bounded to the west and north by urban residential lots.

During the late October and January field surveys, most plants were either dormant or in early seedling form, and as such, very few plants were identifiable even through analysis of dead stems from the prior year. Identifiable plants on the site were predominantly non-native and included perennial ryegrass (*Festuca*

perennis), soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), English plantain (*Plantago lanceolata*), yellow star-thistle (*Centaurea solstitialis*), curly dock (*Rumex crispus*), prickly wild lettuce (*Lactuca serriola*), bindweed (*Convolvulus arvensis*), chicory (*Cichorium intybus*), stinkwort (*Dittrichia graveolens*), common willowherb (*Epilobium brachycarpum*), coyote brush (*Baccharis pilularis*), broad-leaved pepperweed (*Lepidium latifolium*), narrow-leaved milkweed (*Asclepias fascicularis*), Bermuda grass (*Cynodon dactylon*), red maids (*Calandrinia menziesii*), and hairy cat's ear (*Leontodon taraxacoides*). In additional, some mesic areas on the site along relict roadways and in residual depressions from heavy equipment support Mediterranean barley (*Hordeum marinum*), toad rush (*Juncus bufonius*), Fitch's spikeweed (*Centromadia fitchii*), rough cat's ear and hyssop loosestrife (*Lythrum hyssopifolium*).

No trees or shrubs occur within the Study Area. The coyote brush plants that were observed are still small seedlings.

4.1 Soils

The Natural Resources Conservation Service (NRCS) has mapped two soil units within the Study Area (**Figure 4**) (NRCS 2025): (213) San Joaquin silt loam, leveled, 0 to 1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0 to 1 percent slopes. These soils are primarily acidic loams (NRCS 2025). Alkaline soils do not occur within the Study Area.

4.2 Aquatic Resources

The Study Area is located within the previously permitted and mitigated Crooked Creek East project area. The USACE Nationwide Permit Authorization is included as **Attachment D**. Included in the permit authorization is a map showing no aquatic resources within the Milestone II Study Area. As noted above, the Study Area was graded and used as a staging area for construction of the surrounding development (as shown on **Figure 3**), and when that construction was complete, a number of depressions remained. Some of those depressions are now occupied by some facultative wetland plant species, and may have formed into wetlands. Given that the Study Area was previously verified as lacking aquatic resources, and given the challenging time of year, Madrone did not conduct a protocol-level aquatic resources delineation of the Study Area. However, we did map three areas that may be functioning as seasonal wetlands, with a combined acreage of 0.011 acre (**Figure 5**). If these areas are indeed seasonal wetlands, they would not be considered Waters of the U.S. under the current (January 2025) definition due to their isolation, but they could be considered Waters of the State by the Central Valley Regional Water Quality Control Board.

4.3 Special Lands

The Study Area is not within the primary or secondary zones of the Sacramento-San Joaquin Delta. The site does not support critical habitat for any federally listed species and is not within the South Sacramento Habitat Conservation Plan area.

5.0 RESULTS

Table 1 provides a list of special-status species that were evaluated, including the listing status, habitat associations, and their potential to occur in the Study Area for each. The following criteria were used to determine each species' potential for occurrence in the Study Area:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat, or the species was not observed during protocol-level surveys conducted on-site.
- No Habitat Present: The site does not contain suitable habitat for the species or the site is outside the known range of the species.
- Absent: At least marginally suitable habitat is present, but the species was not observed during protocol-level surveys conducted on-site.

Figure 2 shows CNDDB occurrences of special status plant species and wildlife species within five miles of the Study Area. A discussion of all special-status plant and animal species with potential to occur on the site follows **Table 1**.

5.1 Plants

5.1.1 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and other seasonally inundated features at elevations ranging from sea level to approximately 1,500 feet (CNPS 2025). Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May.

The potential seasonal wetlands within the Study Area represent extremely marginal habitat for this species due to the degree of disturbance. There are two records of dwarf downingia within five miles of the Study Area in the CNDDB (**Figure 2**) (CNDDB 2025). The nearest of these (CNDDB Occurrence #55) is located approximately 1.8 miles north near the intersection of Bond and Waterman, and has been extirpated by recent development (CNDDB 2025).

5.2 Invertebrates

5.2.1 Crotch Bumble Bee

Crotch bumble bee (*Bombus crotchii*) has a limited distribution in southwestern North America. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, West Desert, Great Valley,

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Plants				
Brasenia schreberi Watershield	--	CRPR 2B.3	Freshwater marshes and swamps (0' - 7,220')	**No Habitat Present.** The Study Area does not support marshes or swamps.
Calycadenia spicata Spicate rosinweed	--	CRPR 1B.3	Occurs in disturbed areas and openings in cismontane woodland and annual grassland. Often associated with adobe clay, gravelly areas, rock outcrops and mine tailings (elevation 130'-4,600').	**No Habitat Present.** The Study Area is outside of the elevational range of the species and does not contain any of the habitat components.
Carex comosa Bristly sedge	--	CRPR 2B.1	Fresh water marshes or other wet habitats. Occurs between 0-2,050'.	**No Habitat Present.** The Study Area does not support marshes or swamps.
Cicuta maculata var. bolanderi Bolander's water-hemlock	--	CRPR 2B.1	Coastal, fresh, or brackish marshes and swamps (0' – 656').	**No Habitat Present.** The Study Area does not support marshes or swamps.
Cuscuta obtusiflora var. glandulosa Peruvian dodder	--	CRPR 2B.2	Freshwater marshes and swamp. Found in elevations between 50 to 920 feet.	**No Habitat Present.** The Study Area does not support marshes or swamps.
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Mesic areas in valley and foothill grassland, and vernal pools (3' – 1,460').	**Extremely Low.** Although a few isolated seasonal wetlands are present, they are all a result of grading, and no source wetlands remain in the vicinity of the Study Area.
Gratiola heterosepala Boggs Lake hedge-hyssop	--	CE, CRPR 1B.2	Vernal pools and margins of lakes/ponds on clay soils (35' - 7,790').	**No Habitat Present.** Although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species, and clay soils are lacking.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Hibiscus lasiocarpos var. occidentalis Woolly rose-mallow	--	CRPR 1B.2	Occurs in freshwater wetlands/marshes including edges. Often in riprap on sides of levees, but has also been found in detention basins. Found in elevations between sea level to 395 feet.	**No Habitat Present.** The Study Area does not support marshes or swamps.
Juncus leiospermus var. ahartii Ahart's dwarf rush	--	CRPR 1B.2	Occurs along edges of vernal pool and other seasonally ponded features between 100 and 750 feet.	**No Habitat Present.** The Study Area is outside of the elevational range of the species and although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species.
Lasthenia chrysantha Alkali-sink goldfields	--	CRPR 1B.1	Alkaline vernal pools (0' - 655').	**No Habitat Present.** The Study Area does not support alkaline soils.
Lathyrus jepsonii var. jepsonii Delta tule pea	None	CRPR 1B.2	Prefers tidally influenced channels, brackish marshes and swamps below 15 feet.	**No Habitat Present.** The Study Area does not support marshes or swamps and is outside of the elevational range of the species.
Legenere limosa Legenere	--	CRPR 1B.1	Occurs in vernal pools between 5 and 2885 feet.	**No Habitat Present.** Although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species.
Lepidium latipes var. heckardii Heckard's pepper-grass	--	CRPR 1B.2	This annual prefers valley and foothill grasslands with alkaline soils.	**No Habitat Present.** The Study Area does not support alkaline soils.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Lilaeopsis masonii Mason's lilaeopsis	--	CR, CRPR 1B.1	This species prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub at or below 35 feet.	**No Habitat Present.** The Study Area does not support marshes or swamps and is outside of the elevational range of the species.
Limosella australis Delta mudwort	--	CRPR 2B.1	Favors freshwater and brackish marshes, swamps, or riparian scrub. Usually found in association with muddy banks in the Delta. (0-10 feet)	**No Habitat Present.** The Study Area does not support marshes or swamps and is outside of the elevational range of the species.
Orcuttia tenuis Slender Orcutt grass	FT	CE, CRPR 1B.1	Occurs in vernal pools and other seasonally ponded features between 115 and 5775 feet.	**No Habitat Present.** The Study Area is outside of the elevational range of the species and although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species.
Orcuttia viscida Sacramento Orcutt grass	FE	CE, CRPR 1B.1	Occurs in vernal pools between 100 and 330 feet.	**No Habitat Present.** The Study Area is outside of the elevational range of the species and although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species.
Sagittaria sanfordii Sanford's arrowhead	--	CRPR 1B.2	Occurs in emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches (0' - 2,135').	**No Habitat Present.** The Study Area does not support marshes or swamps.
Scutellaria galericulata Marsh skullcap	--	CRPR 2B.2	Lower montane coniferous forest, marshes and swamps, and mesic meadows and seeps (0' – 6,890')	**No Habitat Present.** The Study Area does not support marshes or swamps.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Scutellaria lateriflora Side-flowering skullcap	--	CRPR 2B.2	Freshwater marshes or other wet habitats between 0 and 10 feet. Known in California only from the tidally influenced Sacramento San Joaquin Delta.	**No Habitat Present.** The Study Area does not support marshes or swamps and is outside of the elevational range of the species.
Trifolium hydrophilum Saline clover	--	CRPR 1B.2	Grows in marshes, swamps, and vernal pools with alkaline soils between sea level and 985 feet elevation.	**No Habitat Present.** The Study Area does not support alkaline soils.
Invertebrates				
Bombus crotchii Crotch bumble bee	--	CC	Occurs in open grasslands and scrub habitats.	**High.** The annual grassland within the Study Area could support suitable foraging flower populations.
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Occurs in vernal pools.	**No Habitat Present.** Although shallow mesic areas are present, they do not appear to have a hydroperiod sufficient to support this species. Additionally, two wet-season surveys and one dry-season survey on the larger Crooked Creek project area were all negative for this species.
Danaus plexippus Monarch	PT	--	Migratory species; most prevalent in the Central Valley in summer and early fall. Dependent upon milkweed (*Asclepias* species) plants as its exclusive larval host.	**Low.** Scattered individual narrow-leaf milkweed plants are present on-site.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry (*Sambucus* species) plant as primary host species.	**No Habitat Present.** The Study Area does not support any elderberry shrubs.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	Occurs in vernal pools.	**No Habitat Present.** Although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species. Additionally, two wet-season surveys and one dry-season survey on the larger Crooked Creek project area were all negative for this species.
Fish				
Oncorhynchus mykiss irideus Steelhead – Central Valley Distinct Population Segment (DPS)	FE	--	This anadromous species requires freshwater water courses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	**No Habitat Present.** No drainages occur within the Study Area.
Amphibians				
Spea hammondii Western spadefoot	PT	CSC	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	**No Habitat Present.** Although shallow mesic areas are present, they do not have a hydroperiod sufficient to support this species.
Reptiles				
Actinemys marmorata Northwestern pond turtle	PT	CSC	Occurs in ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**No Habitat Present.** No creeks or ponds occur within or adjacent to the Study Area. Elk Grove Creek is over 400 feet to the south, on the other side of urban residences.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Thamnophis gigas Giant garter snake	FT	CT	Occurs in rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	**No Habitat Present.** No creeks or other aquatic habitat occur within or adjacent to the Study Area. Elk Grove Creek is over 400 feet to the south, on the other side of urban residences.
Birds				
Agelaius tricolor Tricolored blackbird	--	CE, CSC	Colonial nester in cattails (*Typha* species), bulrush (*Schoenoplectus* species), or blackberry (*Rubus* species) associated with marsh habitats.	**No Habitat Present.** The Study Area lacks suitable nesting habitat, and the annual grassland would represent extremely marginal foraging habitat for this species (due to small patch size and urban location) if there were a nearby nesting colony, but neither CNDDB, eBird nor iNaturalist show an nesting colony in the last 25 years within 3 miles of the Study Area.
Aquila chrysaetos Golden eagle	--	CFP	Forages in open areas including grasslands, savannahs, deserts, and early successional stages of shrub and forest communities. Nests in large trees and cliffs.	**No Habitat Present.** The Study Area lacks suitable nesting habitat, and the patch of annual grassland is too small to provide foraging habitat for this species.
Athene cunicularia Burrowing owl	--	CC, CSC	Nests in abandoned ground squirrel (*Otospermophilus beecheyi*) burrows associated with open grassland habitats.	**Low.** No ground squirrel burrows were observed within the Study Area, but marginally suitable refugia may be present in debris scattered around the site.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Buteo swainsoni Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	**Low.** Annual grassland in the Study Area provides marginally suitable foraging habitat for this species due to the small patch size. Suitable nest trees could be present in areas surrounding the Study Area.
Circus hudsonius Northern harrier	--	CSC	Nests in emergent wetland/marsh, open grasslands, or savannah habitats. Forages in open areas such as marshes, agricultural fields, and grasslands.	**No Habitat Present.** The Study Area lacks suitable nesting habitat, and the patch of annual grassland is too small to provide foraging habitat for this species.
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in proximate to foraging habitat are used for perching and nesting.	**Low.** Annual grassland in the Study Area provides marginally suitable foraging habitat for this species due to the small patch size. Suitable nest trees could be present in areas surrounding the Study Area.
Haliaeetus leucocephalus Bald eagle	--	CE	Nest in large trees within 1 mile of lakes, rivers, or larger streams.	**No Habitat Present.** No water bodies or large trees are present within the Study Area.
Lanius ludovicianus Loggerhead shrike	--	CSC	Occurs in open areas with sparse trees, shrubs, and other perches.	**No Habitat Present.** The annual grassland within the Study Area is not a sufficiently large patch to support the species, and no perches are present. The species largely avoids urban areas.

Table 1. Special-Status Species with Potential to Occur within the Milestone II Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Mammals				
Antrozous pallidus Pallid bat	--	CSC, WBWG H	Inhabits low elevation (<6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forests (>7,000 feet). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., bole cavities of oaks, exfoliating valley oak bark), and various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings.	**No Habitat Present.** No roosting habitat occurs within the Study Area.
Taxidea taxus American badger	--	CSC	This species prefers dry open fields, grasslands, and pastures.	**No Habitat Present.** The patch of annual grassland within the Study Area is too small to support this species.

[1]*Status Codes:*

CC – California Candidate for Listing
CSC – CDFW Species of Concern
CE – California Endangered
CT – California Threatened
CR – California Rare
CFP – California Fully Protected
CRPR – California Rare Plant Rank
WL – CDFW Special Animals Watch List
WBWG H – Western Bat Working Group High Threat Rank
WBWG M – Western Bat Working Group Medium Threat Rank
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing
PT – Proposed for Federal Listing as Threatened

and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and Baja California Sur) (Williams et al. 2014) and has been documented in southwest Nevada, near the California border. This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range (Williams et al. 2014; Richardson et al 2014). In California, *B. crotchii* inhabits open grasslands and scrub habitats.

All bumble bees have three basic requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the entirety of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Nests are often located underground in abandoned holes made by ground squirrels, mice, and rats or occasionally abandoned bird nests (Osborne et al 2008). Some species nest on the surface of the ground (in tufts of grass) or in empty cavities. Bumble bees that nest aboveground may require undisturbed areas with nesting resources such as grass and hay to protect nests. Furthermore, areas with woody cover, or other sheltered areas provide bumble bees sites to build their nests (e.g., downed wood, rock walls, brush piles, etc.).

Bumble bees depend on the availability habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. The queen collects nectar and pollen from flowers to support the production of her eggs, which are fertilized by sperm she has stored from mating the previous fall. As generalist foragers, bumble bees do not depend on any one flower type. They generally prefer flowers that are purple, blue or yellow; they are essentially blind to the color red. The plant families most commonly associated with Crotch bumblebee observations in California include Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae (Xerces Society 2018). Very little is known about hibernacula, or overwintering sites utilized by most bumble bees. Generally, bumble bees overwinter in soft, disturbed soil (Goulson 2010), under leaf litter or other debris (Williams et al. 2014), in abandoned holes made by fossorial mammals or occasionally in abandoned bird nests (Osborne at all 2008). Some species nest on the surface of the ground (in grassy tussocks) or in empty cavities (hollow logs, dead trees, under rocks, etc.). Queens most likely overwinter in small cavities just below or on the ground surface.

The Study Area may provide suitable foraging habitat for the species, but nesting or overwintering habitat is sparse. The CNDDB does not list any occurrences of this species within five miles of the Study Area. The nearest sighting recorded in Bumble Bee Watch is one Crotch bumble bee documented about 7.5 miles to the southwest, at Franklin Field in April 2024 (BBW 2025). The iNaturalist database shows one research grade record about 6 miles to the northwest of the Study Area along Santorini Drive in western Elk Grove, recorded in April 2024 (iNaturalist 2025).

5.2.2 Monarch

The monarch butterfly (*Danaus plexippus*) is proposed for listing as threatened under FESA. It is a large conspicuous species that occurs in North, Central, and South America; Australia; New Zealand; islands of the Pacific and Caribbean, and elsewhere (Malcolm and Zalucki 1993 in USFWS 2020). During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (*Asclepias* spp.), and larvae emerge after two to five days (Zalucki 1982 in USFWS 2020). Larvae develop over a period of 9 to 18 days, feeding

on the milkweed and then pupate into chrysalis before eclosing 6 to 14 days later as an adult butterfly (USFWS 2020). Multiple generations of monarchs are produced during the breeding season, with most adult butterflies living approximately two to five weeks (USFWS 2020).

In California, monarchs continue to occupy and breed in areas near their overwintering groves along the California coast into northern Baja California throughout the year, and also disperse over multiple generations to occupy and breed throughout the state in the spring through fall (USFWS 2020). Migrating monarchs in western North America tend to occur more frequently near water sources such as rivers, creeks, roadside ditches, and irrigated gardens (Morris et al. 2015 in USFWS 2020). Adult monarch butterflies require a diversity of blooming nectar resources during breeding and migration (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat.

This species was not observed in the Study Area during Project-related surveys; however, a small patch of what appear to be narrowleaf milkweed (*Asclepias fascicularis*) plants (based on prior year's stems) occur within the Study Area, which represent larval host plants for this species. No CNDDB occurrences of this species are documented within five miles of the Study Area, but the CNDDB only tracks over-wintering locations of this species, which occur near the coast (CNDDB 2025). iNaturalist reports six research-grade records of monarch butterflies within five miles of the Study Area (iNaturalist 2025). The WMMM shows three records of monarchs within five miles of the Study Area (WMMOD 2025). One of the iNaturalist records documents monarch breeding (iNaturalist 2025). The site is not proximate to any overwintering areas for the species (Xerxes Society 2025, CNDDB 2025).

5.3 Birds

5.3.1 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a candidate for listing under the California Endangered Species Act and is designated as a species of special concern by CDFW. They typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (CDFG 1995). The breeding season extends from February 1 through August 31 (CBOC 1993, CDFG 1995).

The annual grasslands within the Study Area represent marginally suitable foraging habitat for this species, particularly due to the small patch size and lack of ground squirrel burrows for nesting habitat. Debris in various locations throughout the Study Area could provide marginally suitable nesting or wintering refugia. The CNDDB lists 7 records for burrowing owl within five miles of the Study Area, the closest of which was recorded in 2010 approximately 2.7 miles southwest of the Study Area, near Kammerer Road and Lent Ranch Parkway (Observation #1631; CNDDB 2025). The closest eBird record is from 2001 and is approximately 0.6 miles southeast of the Study Area, at the Elk Grove airport (Cornell Lab 2025).

5.3.2 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed, but is listed as threatened under CESA. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents (Shuford and Gardali 2008). The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter (Shuford and Gardali 2008).

The annual grasslands throughout the Study Area represent marginal foraging habitat for Swainson's hawk due to the small patch size, and trees are present in the vicinity of the Study Area that represent suitable nesting habitat. The CNDDB documents 66 records of Swainson's hawk nesting within five miles of the Study Area, the closest of which (approximately 0.5 miles to the southwest) was documented in 2003 in a Eucalyptus tree in a residential area (Occurrence #2251; CNDDB 2025). eBird includes numerous observations of Swainson's hawks within five miles of the Study Area over the last 10 years (Cornell Lab 2025).

5.3.3 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not federally or state listed, but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

The annual grasslands throughout the Study Area represent marginal foraging habitat for white-tailed kite due to the small patch size, and trees are present in the vicinity of the Study Area that represent suitable nesting habitat. The CNDDB documents one record of white-tailed kite nesting within five miles of the Study Area, located approximately 3.8 miles south of the Study Area near the intersection of Dillard Road and Highway 99 (Occurrence #18; CNDDB 2025). eBird includes numerous observations of white-tailed kites within five miles of the Study Area over the last 10 years (Cornell Lab 2025).

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details impacts to the biological resources discussed above that may be associated with development of the Project.

6.1 Terrestrial Land Covers

The Project will result in impacts to 9.9 acres of annual grassland. Impacts to annual grassland could affect lifecycle activities of species that rely on annual grassland for nesting and foraging, including Crotch bumblebee, monarch, and several species of special-status and more common birds.

6.2 Aquatic Resources

The Project would result in impacts to seasonal wetlands if seasonal wetlands are determined to be present. The mesic areas mapped on-site total 0.011 acre, and all of them would be impacted by the Project.

6.3 Special-Status Plant Species

Only one special-status plant species has even a marginal potential to occur; dwarf downingia. If dwarf downingia were present, they would be killed by Project implementation.

6.4 Crotch Bumble Bee

The annual grassland within the Study Area represents suitable habitat for Crotch bumble bee. The disturbance and/or removal of this habitat could adversely affect this species if construction activity results in the removal of active Crotch bumble bee nests.

6.5 Monarch

The Study Area supports a patch of narrow-leaf milkweed, host plants for monarch. If milkweed plants are removed during construction, and monarch eggs, larvae, and/or chrysalis are present, individuals of this species could be killed.

6.6 Nesting Raptors and Migratory Birds

Swainson's hawk and white-tailed kite have the potential to nest in the vicinity of the Study Area, as do other more common bird species protected by the MBTA. If any of these protected species were nesting in areas adjacent to active construction, they could be disturbed by construction, which could result in nest abandonment.

6.7 Foraging Raptors

The annual grassland within the Study Area provides marginal foraging habitat for burrowing owl, Swainson's hawk, white-tailed kite, and other more common raptors. Removal of the annual grassland by residential development could reduce reproductive success of raptors nesting in the area.

6.8 Burrowing Owl

The annual grassland throughout Study Area provides suitable foraging habitat for burrowing owl, and debris piles within the Study Area provide marginally suitable refugia. If ground disturbance occurred while burrowing owls were in refugia, individuals of this species could be killed. If burrowing owls were found foraging in the annual grassland, removal of the annual grassland by residential development could reduce potential foraging opportunities.

7.0 AVOIDANCE, MINIMIZATION, AND MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The Study Area is located within the Crooked Creek Estates development, for which a Mitigated Negative Declaration/Initial Environmental Study (MND/IS) has been prepared. We have recommended mitigation measures below consistent with the MND/IS where it is applicable, and have provided unique mitigation measures for resources not addressed in the MND/IS (due to recent listing decisions).

7.1 Aquatic Resources

The Project may result in the loss of aquatic resources if present. We recommend the following measures to ensure that impacts to aquatic resources, if any, are mitigated consistent with the MND/IS and state and federal regulations. Note that none of the 2.75 acres of wetland referred to in the MND/IS was documented within the Study Area, and all impacts to aquatic resources associated with the Crooked Creek project have already been mitigated. Additionally, it should be noted that the definition of Waters of the U.S. has changed since the MND/IS was drafted. We anticipate that if any aquatic resources occur within the Study Area, they would likely not be subject to USACE Jurisdiction. However, the CVRWQCB could consider the features to be Waters of the State, and as such, the mitigation measure could be satisfied in conjunction with the terms of Waste Discharge Requirements.

- Conduct an aquatic resources delineation of the Study Area in accordance with the USACE Sacramento District's *Minimum Standards for Acceptance of Preliminary Aquatic Resources Delineations* and the U.S. Army Corps of Engineers (USACE) *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, and submit it to the USACE with a request for verification or with a request for an Approved Jurisdictional Determination.
- If the USACE determines that aquatic resources are present within the Study Area and they fall under the jurisdiction of the USACE, then the applicant shall implement MND/IS Mitigation Measure 8, which reads as follows:

  The project proponent shall ensure that the project will result in no net loss of any wetland habitat found on the site. No net loss shall be achieved by the following methods:

  1) Preserve and protect the existing 2.75 acres of wetlands.

  OR, if any wetlands are to be disturbed:

  2) Prior to any disturbance of on-site wetlands, submit a Wetland Habitat Mitigation Plan for 2.75 acres of identified wetland to the City of Elk Grove for review and approval. Mitigation Plan shall provide a detailed description of the size, location and design of proposed wetland creation sites, and a detailed description of how the created wetlands will be monitored and managed to ensure the success of the mitigation effort, OR

  3) Prior to any disturbance of on-site wetlands, purchase credits at an approved wetland mitigation bank. Documentation of such purchase shall be submitted to City of Elk Grove Development Services Planning for review and approval.

Note: This mitigation measure may be satisfied in conjunction with the requirements of a United States Army Corps of Engineers 404 permit, if one is necessary.

- If the USACE determines there are aquatic resource on the project site and they are not under the jurisdiction of the USACE then the Project proponent shall submit a Report of Waste Discharge to the Central Valley RWQCB with a request for waste discharge requirements and adhere to the waste discharge requirements.

7.2 Special-Status Plant Species

We recommend that the applicant comply with MND/IS Mitigation Measure 3, which reads as follows:

Prior to approval of improvement plans, a special-status/rare plant survey shall be conducted, at the time of year when special-status/rare plant species are both evident and identifiable, by a qualified botanist for the portions of the project site supporting wetland and riparian vegetation. Results of the special-status/ rare plant survey shall be submitted to the California Department of Fish and Game and City of Elk Grove Development Services- Planning for review and approval. If special-status or rare plant species are found within the proposed development area, a mitigation plan prepared by a qualified botanist in consultation with the Department of Fish and Game, shall be submitted to the City of Elk Grove- Planning for review and approval. Upon approval, the mitigation plan shall be implemented. The plan shall include but not limited to, the type, quantity, quality and location of the species and the appropriate mitigation method (e.g. transplantation, on-site and off-site preservation) recommended by the biologist or CDFG, mitigation success criteria, and contingency plans for failure to meet the success criteria.

7.3 Crotch Bumble Bee

Crotch bumble bee could utilize the annual grassland for foraging or nesting. Crotch bumble bee was designated as a candidate for listing under the CESA in 2019, but no decision on listing has been published. If, at the time of project implementation, the species is not a CESA candidate or CESA listed, and it does not fall into any of the other special-status categories defined in **Section 3.0**, then it would not qualify for protections under CEQA and no mitigation is necessary.

Because Crotch bumble bee is a candidate species, appropriate mitigation measures are still being developed and refined. The following measures have been developed based on current literature and research and CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023). If at a later date a different mitigation measure is determined to be more appropriate, that can be submitted to the City at that time for review and approval.

If Project activities will result in development within annual grassland, then:

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between 1 September and 31 March (i.e., outside the colony active period), if feasible, to avoid impacts on Crotch bumble bee.

- If completing all initial ground-disturbing work between 1 September and 31 March is not feasible, then a senior biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a pre-construction survey for Crotch bumble bee in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65° F and 90° Fahrenheit, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast, and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.
- At a minimum, pre-construction survey methods shall include the following:
  - Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.
  - If bumble bees are observed, attempt to photograph the individual and identify it to species.
  - If Crotch bumble bees are observed, watch the individuals and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.
  - Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.
  - If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than 4 inches to assist with locating the nest.
  - Look for concentrated special-status bumble bee activity.
  - Listen for the humming of a nest colony.
- The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could otherwise harm special-status bumble bees. The report shall be submitted to the City prior to the commencement of construction activities.
- If no bumble bees are located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then no further mitigation or coordination with the City and/or CDFW is required.
- If any sign(s) of a bumble bee nest is observed, and/or if it cannot be established the species present is not a special-status bumble bee, then construction shall not commence until either 1) the bumble

bees present are positively identification as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include but not be limited to waiting until the colony active season ends; establishment of nest buffers; or obtaining an Incidental Take Permit (ITP) from CDFW.

- It is recommended, but not required, that the Project proponent also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying special-status bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.
- If, after coordination with CDFW, impacts to Crotch bumble bee cannot be avoided, the Project proponent shall obtain an ITP from CDFW prior to the City's approval of permits authorizing construction, and the Project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the Project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

7.4 Monarch Butterfly

Monarch butterfly has been proposed for federal listing as threatened under the ESA. If, at the time of project implementation, it is not a ESA candidate or ESA listed, and it does not fall into any of the other "special-status" categories defined in **Section 3.0**, then it would not qualify for protections under CEQA and no mitigation is necessary. As this is a proposed threatened species, appropriate mitigation measures are still being developed and refined for this species. We have developed the following measure based on current literature and research. If at a later date, a different mitigation measure is determined to be more appropriate, that can be submitted to the City and USFWS at that time for review and approval. Note that USFWS staff have stated that they will not formally consult on species proposed for listing or designated as candidates, so until such time as this species is formally listed, USFWS may not respond to communications regarding this species.

If construction will occur within annual grassland during the time when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September), a pre-construction survey shall be conducted by a qualified biologist no earlier than 15 days prior to construction within the proposed impact area and a 50-foot buffer in accessible areas (cumulatively, Survey Area). The biologist shall comprehensively search the Survey Area for milkweed plants, and all milkweed plants found shall be surveyed for monarch eggs, larvae (i.e., caterpillars), and chrysalises. Additionally, other plants immediately adjacent to milkweed plants shall also be searched for chrysalises. If no eggs, caterpillars, or chrysalises are detected, no additional mitigation measures are necessary.

If eggs, caterpillars or chrysalises are found, the plants shall be avoided with a 50-foot buffer until metamorphosis is completed and adult butterflies emerge and voluntarily leave the host plant. If the eggs, larvae, or chrysalises cannot be avoided, all eggs, larvae, and chrysalises, including the portion of the plant

to which they are attached, will be translocated to an alternative location. That location must be a minimum of 50 feet outside of the impact area and contain a similarly sized or larger population of larval host plants. The portions of the plants supporting eggs or chrysalises shall be tied to the live stem of the avoided larval host plant while caterpillars will be placed directly on a stem or leaf of a larval host plant. Should the species be listed under FESA in the future, coordination with USFWS shall be conducted prior to translocation.

7.5 Nesting Swainson's Hawks

We recommend that the applicant comply with MND/IS Mitigation Measure 7, which reads as follows:

In order to mitigate for potential adverse impacts to nesting Swainson' s hawks, a pre-construction survey shall be conducted by a qualified biologist contracted by the applicant or by the City and funded by the applicant if construction activities are planned between March and August. The survey shall be conducted within 30 days of the start of construction activities for a 1/2-mile radius. In addition, a survey of the project site and areas within 500 feet of the project site shall be conducted once in April and once in May. If active Swainson's hawk' s nests are found, the applicant shall consult with the Department of Fish and Game and clearing and construction shall be postponed or halted until all young have fledged and additional nesting attempts no longer occur. If a nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained and mitigation implemented pursuant to CDFG guidelines.

Prior to approval of Improvement Plan or Grading Permit, the applicant shall provide Development Services-Planning written verification that a qualified biologist has been retained by the applicant to perform the pre-construction survey. This action may be waived if the biologist will be contracted by the city at the applicant's expense.

No earlier than 30 days before commencement of construction activities, including land clearing, the qualified biologist shall submit and certify to the Planning Director, the results of the pre-construction survey. Failure to submit the required survey results will delay the approval to initiate construction activities, including land clearing.

No later than April 30, the qualified biologist shall submit and certify to the Planning Director, the results of the 500- foot site perimeter survey. Failure to submit the required survey results will cause any construction activity to be halted until such results are submitted and approved by the Planning Director. If no construction activities have taken place, failure to submit the required survey results will delay the approval to initiate construction activities, including land clearing.

No later than May 31, the qualified biologist shall submit and certify to the Planning Director, the results of the 500- foot site perimeter survey. Failure to submit the required survey results will cause any construction activity to be halted until such results are submitted and approved by the Planning Director. If no construction activities have taken place, failure to submit the required survey results will delay the approval to initiate construction activities, including land clearing.

7.6 Foraging Swainson's Hawks

The applicant has already complied with MND/IS Mitigation Measure 6, which reads as follows:

> *The project applicant shall mitigate for the loss of suitable Swainson's hawk foraging habitat by acquiring conservation easements or other instruments to preserve an equal acreage of said habitat. The preservation of this habitat may be done at one time, prior to the City's approval of the Project's first grading permit, or may be done in increments with the build-out of the Project, with preservation occurring prior to each grading permit approval. Prior to acquiring easements, the applicant shall consult with the City to verify that the land proposed for conservation constitutes suitable Swainson's hawk foraging habitat. In addition, conservation easements or other instruments to be acquired must conform to the requirements of Chapter 16.130 of the City of Elk Grove Municipal Code.*

Swainson's hawk foraging habitat mitigation was purchased for all proposed impact areas within Crooked Creek Estates (including the Study Area) to the satisfaction of the City. The Conservation Easement for this mitigation is included for reference as **Attachment E**. No further mitigation is recommended.

7.7 Nesting Raptors (Including Burrowing Owl) and Other Birds

We recommend the following measures to avoid and minimize potential impacts to nesting raptors and other birds protected by the MBTA and/or state and federal regulations.

- If ground disturbance or other construction activities are proposed during the bird nesting season (February 1 – August 31), a focused survey for nesting raptors and migratory bird nests shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within the following buffer areas:
  - 0.25 mile for tree-nesting raptors
  - 500 feet for all other species
- Regardless of the time of year, one pre-construction (take avoidance) burrowing owl survey of suitable habitat will be conducted consistent with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) methodology. The survey will be conducted no greater than 14 days prior to the start of construction.
- If no active nests/burrows are found, no further mitigation is required. Surveys must be repeated if a lapse in construction activity exceeds 14 days and construction resumes during the nesting season.
- If active nests/burrows are found:
  - Active raptor nests: no construction activities shall take place within 0.25-mile for Swainson's hawk or within 500 feet of other raptor nest(s). The buffer(s) may be removed once the young have fledged and/or are no longer dependent on the nest;
  - Occupied burrowing owl burrows: a minimum buffer of 164 feet shall established and maintain around the occupied burrow throughout construction. The actual buffer size shall be determined by the qualified biologist based on the time of year and level of disturbance in accordance with guidance provided in the CDFW *Staff Report on Burrowing Owl Mitigation*

(CDFW 2012) and may be as large as 1,640 feet. No construction activities shall take place within the buffer, and the no-disturbance buffer shall be marked on-site. The buffer may be removed once the burrow is no longer occupied;

- Active nests of other birds: no construction activities shall take place within 100 feet of an active nest, and the no-disturbance buffer shall be marked on-site. The buffer may be removed once the young have fledged and/or are no longer dependent on the nest.

- No-disturbance buffers for all species may be reduced based on consultation and approval by the City and/or CDFW for burrowing owl or white-tailed kite.
- The perimeter of protected areas on-site shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter protected areas, except with approval of the biologist. If trees containing nests or nests/burrows must be removed as a result of Project implementation, removal shall be completed during the nonbreeding season (late September to February 1) if possible, or after a qualified biologist determines that the young have fledged (during the breeding season).
- Survey results shall be provided to the City within 14 days of completion of all surveys.

7.8 Foraging Burrowing Owl

If nesting burrowing owls are found during the pre-construction survey, mitigation for the permanent loss of burrowing owl foraging habitat (defined as all areas of suitable habitat within 250 feet of the active burrow) shall be accomplished at a 1:1 ratio or at a ratio acceptable to the City. The mitigation provided shall be consistent with recommendations in the CDFW *Staff Report on Burrowing Owl Mitigation* and may be accomplished within the Swainson's hawk foraging habitat mitigation area already established for the Project if burrowing owls have been documented utilizing that area, or if the qualified biologist, the City, and CDFW collectively determine that the previously completed mitigation area is suitable for both species.

7.9 Worker Environmental Awareness Training

We recommend the following measure to ensure that construction crews understand potential biological resource concerns and the need for awareness during construction.

Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will address the state and federal Endangered Species Act; the Clean Water Act and/or Porter-Cologne; the Project's permits and CEQA documentation and associated mitigation measures; consequences and penalties for violation or noncompliance with applicable laws and regulations; identification of special-status wildlife; location of any avoided resources; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be

shown designated avoidance areas during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. If not already required, fencing and signage around the boundary of avoidance areas may be helpful.

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Figures

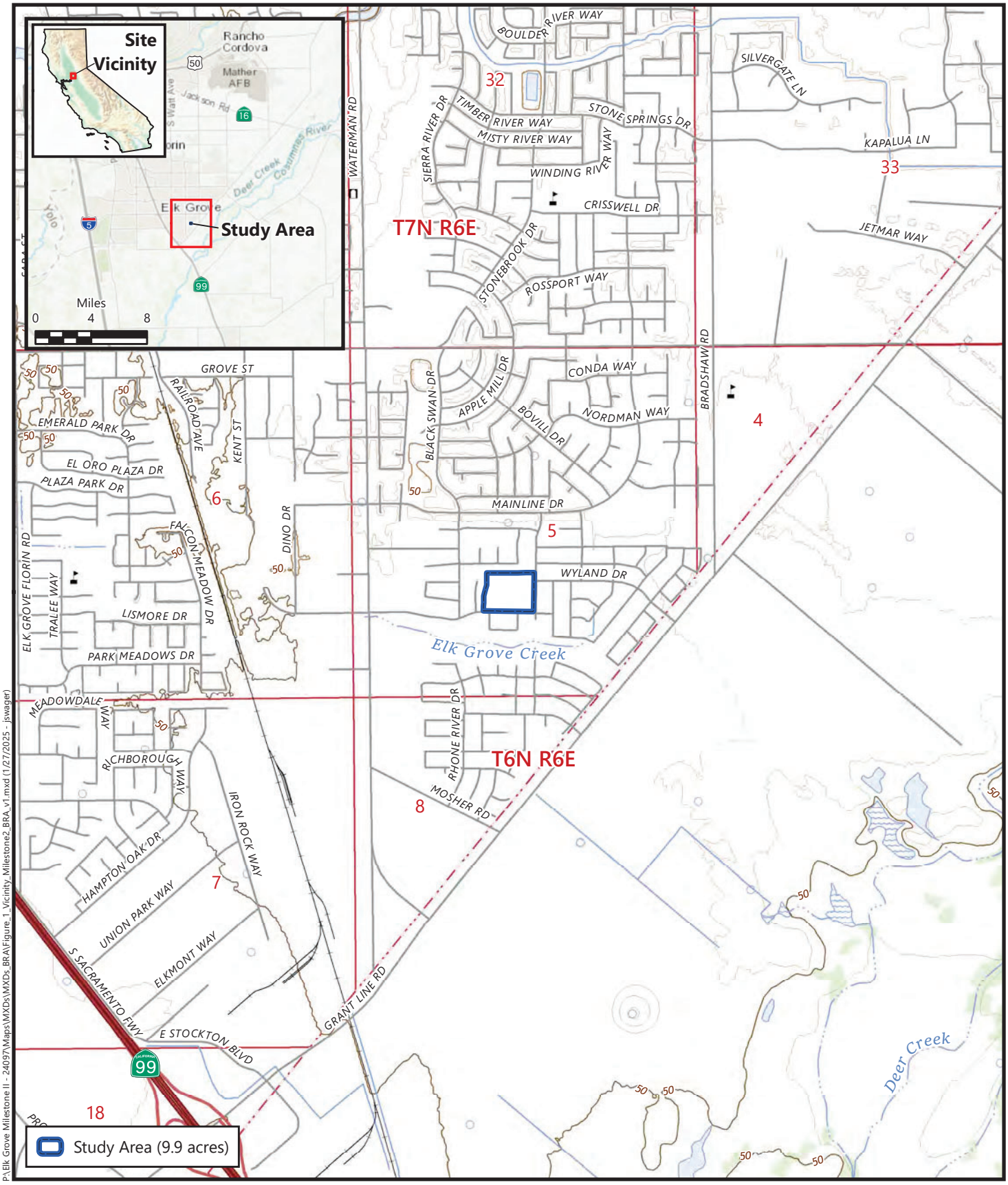
Figure 1. Site and Vicinity

Figure 2. California Natural Diversity Database Occurrences

Figure 3. Crooked Creek East Development – 2018 Aerial Photograph

Figure 4. Natural Resources Conservation Service Soils

Figure 5. Potential Aquatic Resources



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Source: United States Geologic Survey, 2022
"Elk Grove, California" 7.5-Minute Topographic Quadrangle
Section 5, Township 6 North, Range 6 East, MDBM
Latitude (NAD83): 38.398864°, Longitude (NAD83): -121.345533°

Figure 1
Site and Vicinity

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

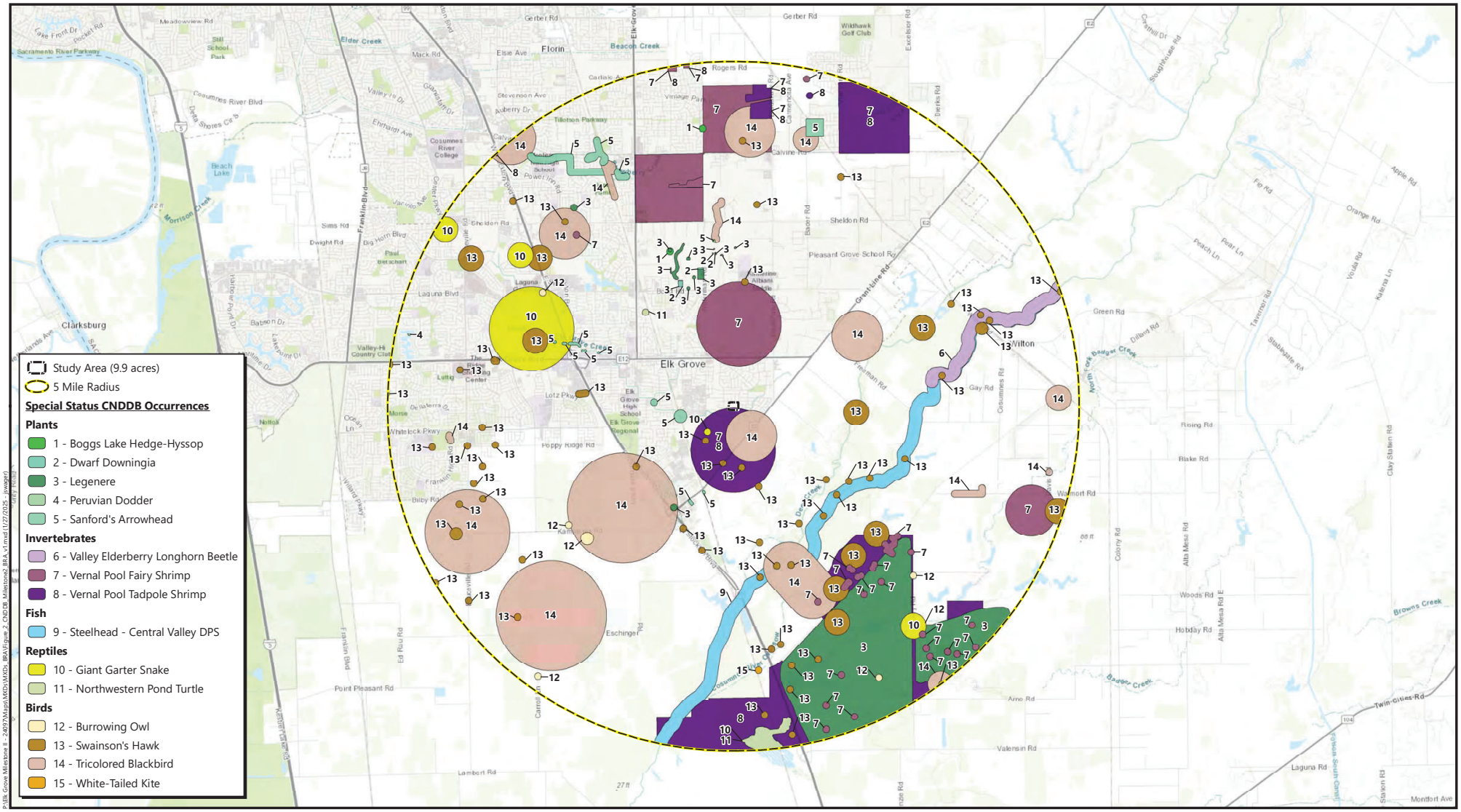

Figure 2
California Natural Diversity Database Occurrences

Milestone II
Elk Grove, Sacramento County, California

Source: California Department of Fish and Wildlife, December 2024
Basemap Source: ESRI World Topographic Map

MADRONE ECOLOGICAL CONSULTING



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Feet

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Figure 3
Crooked Creek East Development
2018 Aerial Photograph

Milestone II
Elk Grove, Sacramento County, California

Boundary Source: Sacramento County GIS Parcels
Aerial Source: GoogleEarth, November 2018

MADRONE ECOLOGICAL CONSULTING



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Feet
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Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for Sacramento County, California*
Aerial Source: Maxar, 26 April 2022

Figure 4
Natural Resources Conservation Service Soils

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

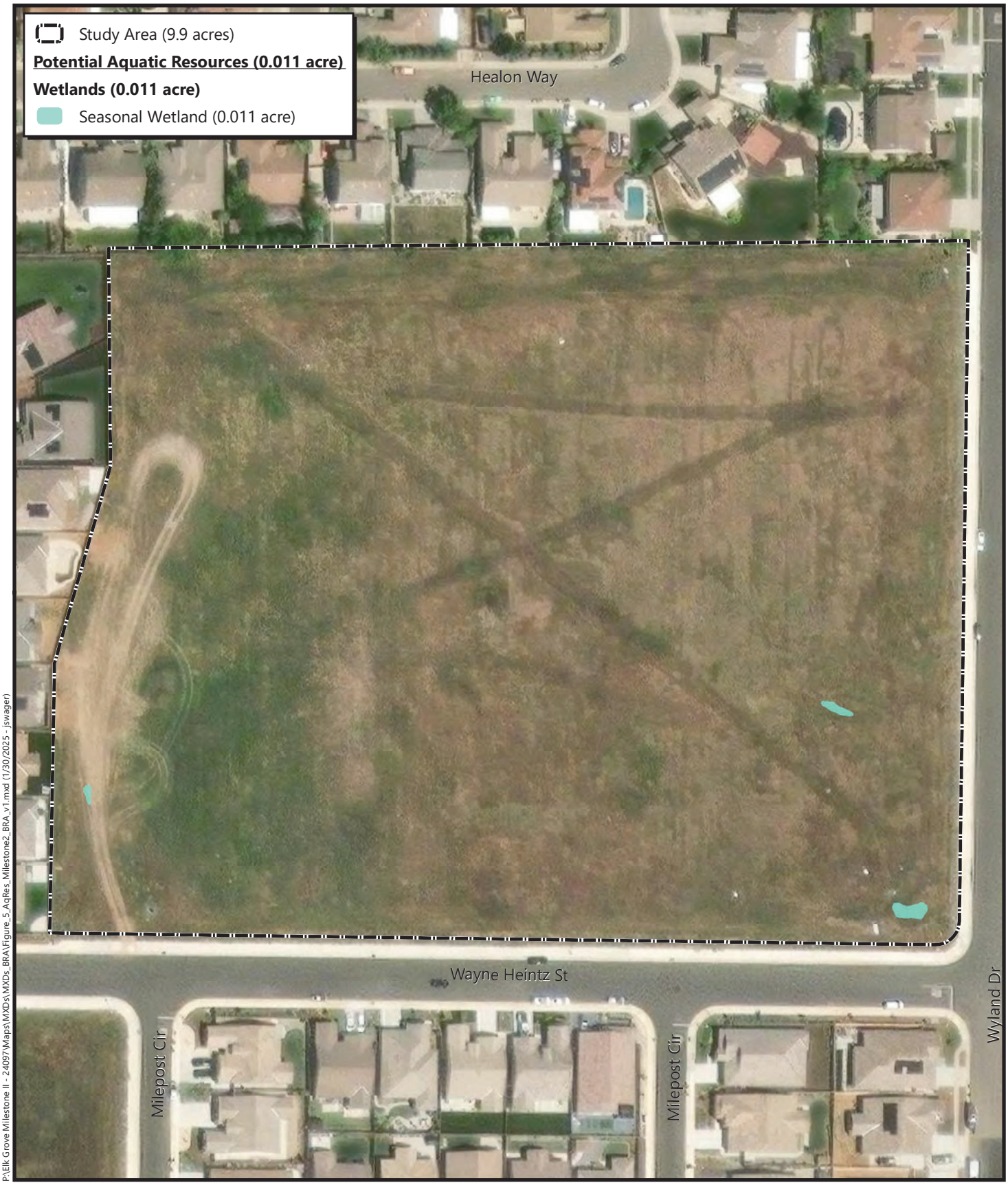

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Figure 5
Potential Aquatic Resources

Milestone II
Elk Grove, Sacramento County, California

Boundary Source: Sacramento County GIS Parcels
Aerial Source: Maxar, 26 April 2022

Attachments

Attachment A. Preliminary Site Plan

Attachment B. IPaC Trust Resource Report for the Study Area

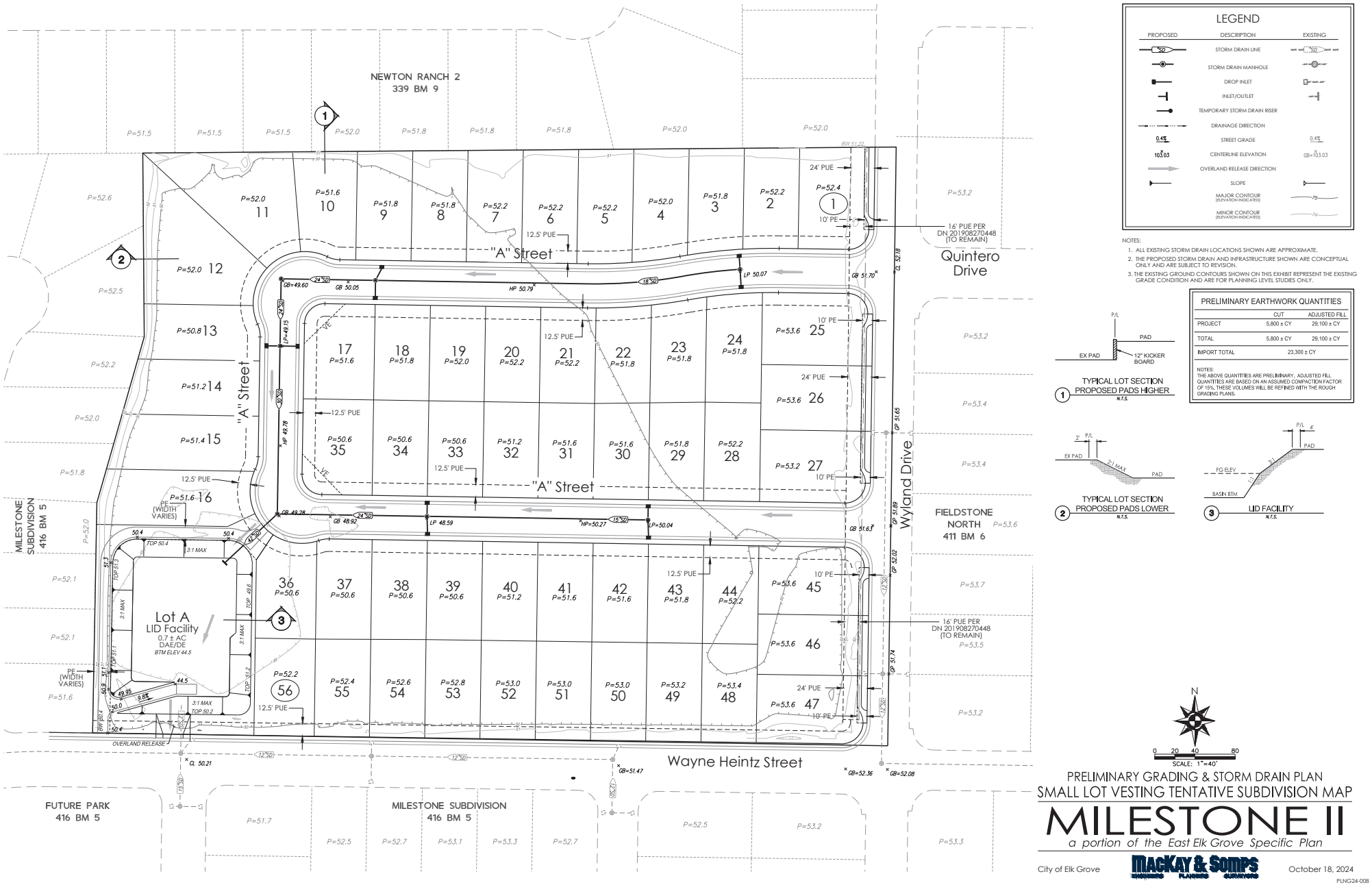
Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Elk Grove, California" USGS Quadrangle and Eight Surrounding Quadrangles

Attachment D. Nationwide Permit Authorization for Crooked Creek Estates East

Attachment E: Swainson's Hawk Foraging Habitat Mitigation Conservation Easement

Attachment A

Preliminary Site Plan



LEGEND

PROPOSED	DESCRIPTION	EXISTING
50	STORM DRAIN LINE	50
	STORM DRAIN MANHOLE	
	DROP INLET	
	INLET/OUTLET	
	TEMPORARY STORM DRAIN RISER	
	DRAINAGE DIRECTION	
0.4%	STREET GRADE	0.4%
103.03	CENTERLINE ELEVATION	GB=103.03
	OVERLAND RELEASE DIRECTION	
	SLOPE	
	MAJOR CONTOUR (ELEVATION INDICATED)	75
	MINOR CONTOUR (ELEVATION INDICATED)	74

NOTES:

1. ALL EXISTING STORM DRAIN LOCATIONS SHOWN ARE APPROXIMATE.
2. THE PROPOSED STORM DRAIN AND INFRASTRUCTURE SHOWN ARE CONCEPTUAL ONLY AND ARE SUBJECT TO REVISION.
3. THE EXISTING GROUND CONTOURS SHOWN ON THIS EXHIBIT REPRESENT THE EXISTING GRADE CONDITION AND ARE FOR PLANNING LEVEL STUDIES ONLY.

PRELIMINARY EARTHWORK QUANTITIES

	CUT	ADJUSTED FILL
PROJECT	5,800 ± CY	29,100 ± CY
TOTAL	5,800 ± CY	29,100 ± CY
IMPORT TOTAL		23,300 ± CY

NOTES:
THE ABOVE QUANTITIES ARE PRELIMINARY. ADJUSTED FILL QUANTITIES ARE BASED ON AN ASSUMED COMPACTION FACTOR OF 15%, THESE VOLUMES WILL BE REFINED WITH THE ROUGH GRADING PLANS.

1 TYPICAL LOT SECTION PROPOSED PADS HIGHER N.T.S.

2 TYPICAL LOT SECTION PROPOSED PADS LOWER N.T.S.

3 LID FACILITY N.T.S.

PRELIMINARY GRADING & STORM DRAIN PLAN
SMALL LOT VESTING TENTATIVE SUBDIVISION MAP

MILESTONE II

a portion of the East Elk Grove Specific Plan

City of Elk Grove

MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

October 18, 2024

PLNG24-008
Sheet 2 of 3

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Attachment B

IPaC Trust Resource Report
for the Study Area

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

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Location

Sacramento County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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2. 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.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this speciesYour location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this speciesYour location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

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Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species.Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species.Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Sacramento Orcutt Grass Orcuttia viscida Wherever found There is **final** critical habitat for this species.Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5507	Endangered
Slender Orcutt Grass Orcuttia tenuis Wherever found There is **final** critical habitat for this species.Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1063	Threatened

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act[2] and the Migratory Bird Treaty Act (MBTA)[1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete

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If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles" specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence(■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▮)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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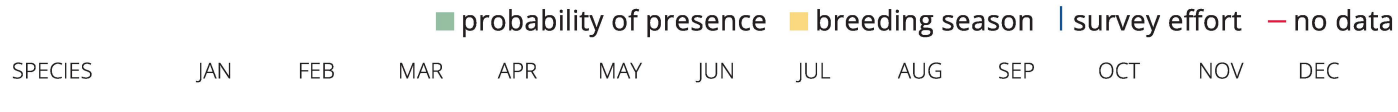

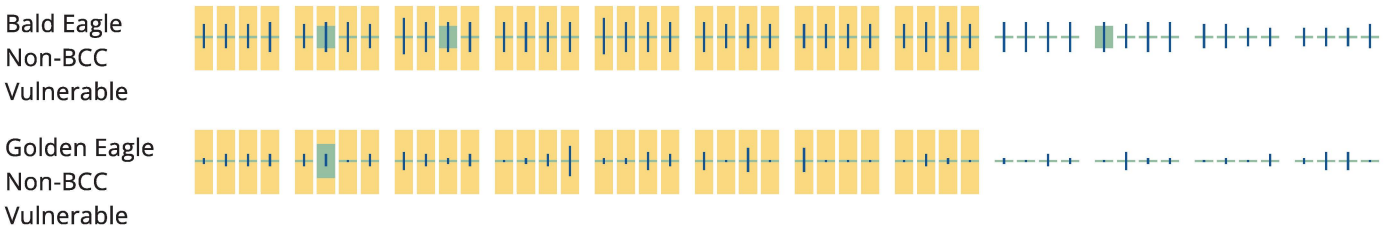

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of

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presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Migratory birds

The Migratory Bird Treaty Act (MBTA)[1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Actof 1918.
2. The Bald and Golden Eagle Protection Actof 1940.

Additional information can be found using the following links:

- Eagle Managementhttps://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-

golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25

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California Gull Larus californicus — Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Nuttall's Woodpecker Dryobates nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

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Santa Barbara Song Sparrow Melospiza melodia graminea This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles"specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence(■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

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2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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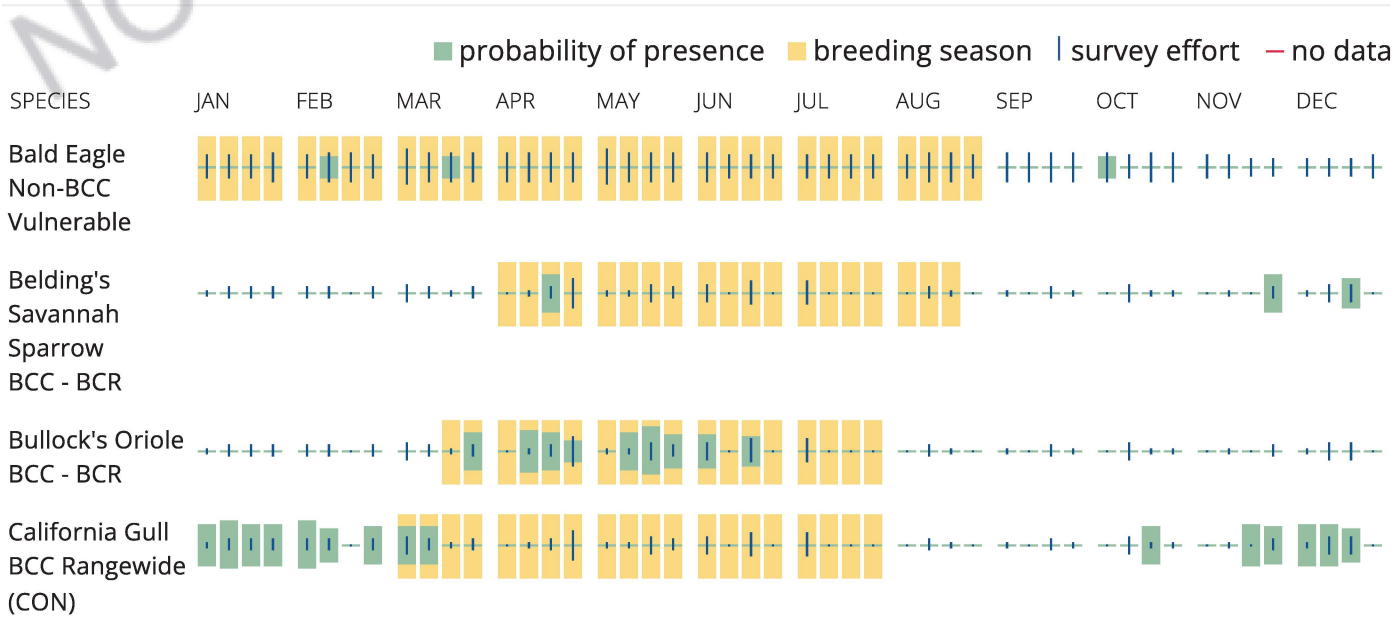

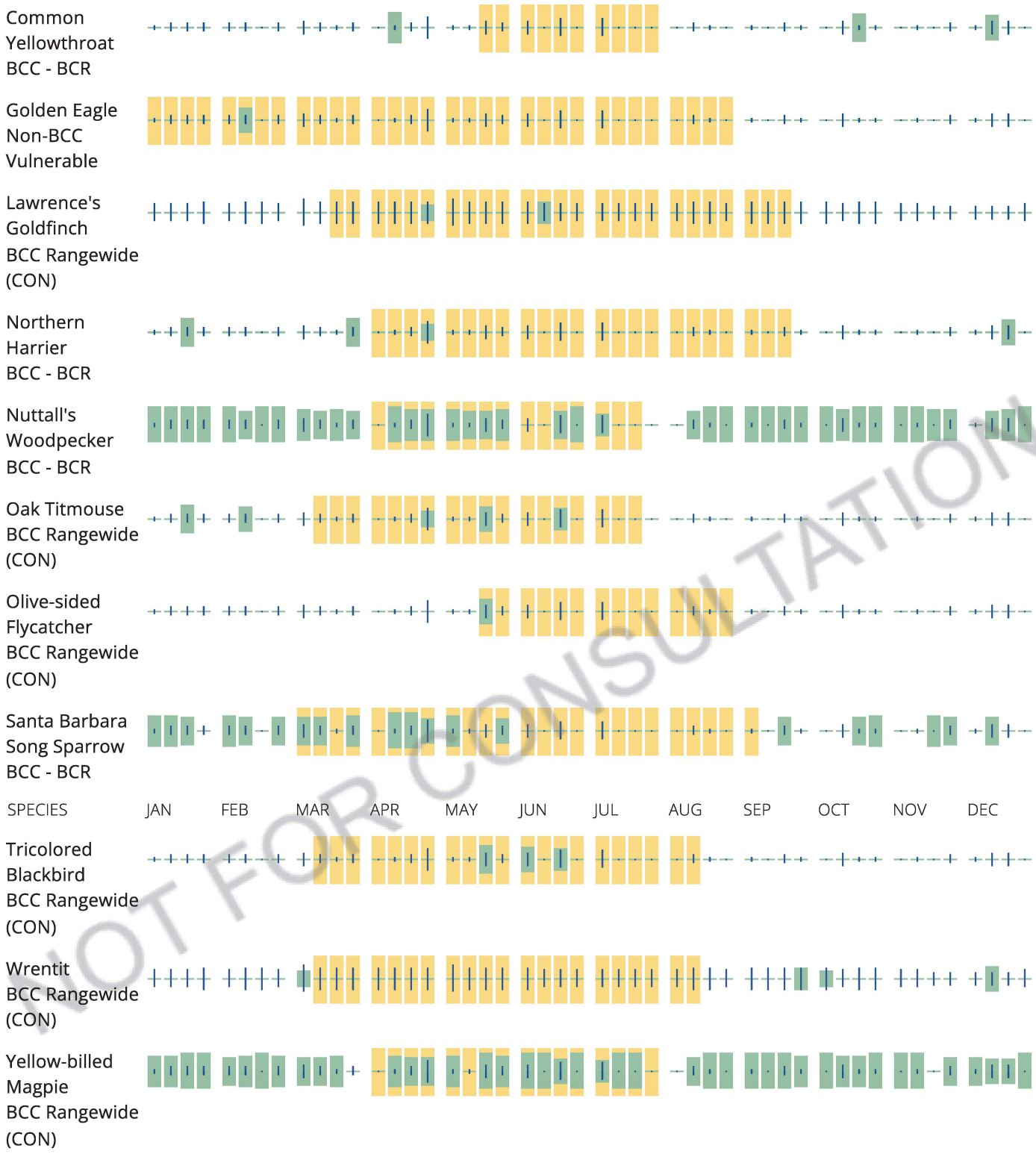

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Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways

to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars

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on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts

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from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or

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submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Attachment C

CNPS Inventory of Rare and Endangered Plants Query for the "Elk Grove, California" USGS Quadrangle and Eight Surrounding Quadrangles

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

21 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [**1A:1B:2A:2B:3**] , 9-Quad include [**3812132:3812153:3812143:3812142:3812133:3812152:3812144:3812134:3812154**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	2B.3
Calycadenia spicata	spicate calycadenia	Asteraceae	annual herb	May-Sep	None	None	1B.3
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	2B.1
Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	None	None	2B.1
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	2B.2
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	2B.2

Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	1B.2
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	1B.2
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	1B.2
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	1B.1
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	None	None	1B.2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	1B.1
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	None	None	1B.2
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	1B.1
Limosella australis	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	May-Aug	None	None	2B.1
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	1B.1
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	1B.1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	1B.2

Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	2B.2
Scutellaria lateriflora	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	Jul-Sep	None	None	2B.2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	None	None	1B.2

Showing 1 to 21 of 21 entries

Go to top

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 30 January 2025].

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Attachment D

Nationwide Permit Authorization
for Crooked Creek Estates East

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

June 21, 2017

Regulatory Division (SPK-2016-00460)

Pacific Housing, Inc.
Attn: Mr. Mark Wiese
2115 J Street, Suite 201
Sacramento, California 95816

Dear Mr. Wiese:

We are responding to your February 13, 2017, pre-construction notification for a Department of the Army Nationwide permit for the Crooked Creek East project. The approximately 48.9-acre project site is located on Waterman Road, Latitude 38.39848°, Longitude -121.34758°, Elk Grove, Sacramento County, California.

Based on the information you provided to this office, the Crooked Creek East project involves the discharge of fill material into 0.252 acre of waters of the U.S. for the construction of a residential development, subject to Section 404 of the Clean Water Act. The specific activities that require DA authorization are the fill of the aquatic resources. These activities will result in the permanent effects to 0.252 acre of seasonal wetland, irrigation ditch and intermittent drainage, including the permanent loss of 0.252 acre of seasonal wetland, irrigation ditch and intermittent drainage. The activities will result in 0.026 acre of indirect impact to a seasonal wetland. The proposed activities would be conducted in accordance with the *Waters of the U.S. Impacts and Avoidance plans* dated June 21, 2014.

We have determined activities in waters of the U.S. associated with the project are authorized by Nationwide Permit Number (NWP) 29. However, this authorization is denied without prejudice until water quality certification under Section 401 of the Clean Water Act has been issued or waived for the activities requiring a permit from this office. Once you receive water quality certification or waiver thereof, the activities are authorized and the work may proceed subject to the conditions of water quality certification, and the terms and conditions of the NWP.

You must comply with all terms and conditions of the NWP and applicable regional conditions. Information about the NWP terms and conditions and Sacramento District regional conditions for California, excluding the Lake Tahoe Basin are available on our website at *www.spk.usace.army.mil/Missions/Regulatory/Permitting/NationwidePermits.aspx*. In addition, your work must comply with the following special condition:

1. To mitigate for the loss of 0.252 acre of waters of the United States and indirect impacts to 0.026 acre of waters of the United States, you shall purchase 0.265 credits of Flood Mosaic Wetland Creation habitat at Cosumnes Floodplain Mitigation Bank. Evidence of this purchase shall be provided to this office prior to initiation of construction activities within waters of the U.S.

Within 30 days after completion of the authorized work, you must sign the enclosed Compliance Certification and return it to this office with the information required by Sacramento District Regional Condition C(9) for California/Nevada/Utah.

This verification is valid until March 18, 2022, when the existing NWPs are scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date the NWP is modified, reissued, or revoked, you will have 12 months from the date of the modification, reissuance or revocation to complete the activity under the present terms and conditions. Failure to comply with the general and regional conditions of this NWP, or the project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization.

We would appreciate your feedback on this permit action including your interaction with our staff and processes. For more information about our program or to complete our Regulatory Program national customer service survey, visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx.*

Please refer to identification number SPK-2016-00460 in any correspondence concerning this project. If you have any questions, please contact Ms. Jessica Neal at 1325 J Street, Sacramento, CA 95816, by email at *Jessica.L.Neal@usace.army.mil,* or telephone at 916-557-6883.

Sincerely,

Peck Ha
Senior Project Manager
CA Delta Section

cc:
Ms. Daria Snider, Madrone Ecological Consulting, dsnider@MadroneEco.com



Waters of the U. S. Impact/Avoidance			
Waters Type	**Impact**	**Avoided**	**Total**
Seasonal Wetlands	0.161	0.026	0.187
Intermittent Channel	0.000	0.133	0.133
Irrigation Ditches	0.091	0.000	0.091
Total	**0.252**	**0.159**	**0.411**

Landuse Source: MacKay & Somps
Aerial Source: *USDA, National Agriculture Imagery Program*, 21 June 2014

Figure 2
Waters of the U.S. Impacts and Avoidance

Crooked Creek
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Attachment E

Swainson's Hawk
Foraging Habitat Mitigation
Conservation Easement

Recording Requested By,
and When Recorded,
Return To:

City of Elk Grove
Attn: City Clerk
8401 Laguna Palms Way
Elk Grove, CA 95758

No Transfer Tax Due as this conveyance is for the benefit of the City of Elk Grove. California Revenue and Taxat Code §11922
Exempt from Recording Fees Pursuant to California Government Code §27383

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

GRANT DEED OF SWAINSON'S HAWK HABITAT & AGRICULTURE LAND CONSERVATION EASEMENT

THIS GRANT DEED OF SWAINSON'S HAWK HABITAT CONSERVATION EASEMENT is made as of ~~August 8~~ November, 2018 by and between Judith E. Pond, Trustee of the Judith E. Pond 2012 Trust ("Grantor") and the **City of Elk Grove** ("City"), a municipal corporation, as "grantee." dated August 13, 2012

RECITALS

A. Grantor owns real property consisting of approximately 36.12 acres, in Sacramento County, California, as described in Exhibit A and shown more particularly on the map attached as Exhibit B, attached hereto and incorporated herein, together with all appurtenances thereto, including all surface mineral and mineral rights, and all water and water rights appurtenant to such land (collectively, the "Property").

B. The Property is comprised of open space land, appropriate to use for agriculture, and also essential to providing foraging and/or nesting habitat for Swainson's hawks, and other significant relatively natural habitat and buffer for many species of wildlife including, but not limited to, raptors, migratory birds, and others.

C. Protection and preservation of the Property, including its wildlife habitat, will assure that this area and its existing features will continue to be available for agriculture, to provide foraging and or nesting habitat for Swainson's hawks and other natural habitat values and buffer for wildlife, a significant public benefit by preserving open space against development pressure, and scenic qualities unique to the Cosumnes River Watershed.

D. As fee owner, Grantor owns the affirmative rights to identify, preserve, and protect forever the existing features and values of the Property.

E. The State of California recognizes the public importance and validity of conservation easements by enactment of Section 815 et seq. of the Civil Code, and the City is an entity qualified under such Civil Code provisions to hold a conservation easement.

F. The City is a local government agency in the State of California, and is a "qualified organization" within the provisions of Section 170(h)(3) of the Internal Revenue Code of 1986, as amended, qualified to acquire and hold conservation easements.

G. To accomplish all of the aforementioned purposes, Grantor intends to convey to the City and the City intends to obtain a nonexclusive easement restricting the use which may be made of the Property, to preserve and protect forever the agricultural uses, open-space, foraging and/or nesting habitat for Swainson's hawks and scenic values of the Property.

NOW, THEREFORE, in consideration of the above and the mutual covenants, terms, conditions, and restrictions contained herein, and for the good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to the laws of the State of California and in particular California Civil Code section 815 et seq., Grantor hereby voluntarily grants and conveys to the City, its successors and assigns, a nonexclusive Easement in gross, forever in, on, over, and across the Property (the "Easement"), subject to the terms and conditions set forth herein, restricting forever the uses which may be made of the Property, and the parties agree as follows:

1. PURPOSES: The multiple natural resource conservation purposes of the Easement are to preserve and protect in perpetuity (a) the availability of the Property for agriculture by protecting the Property from development pressure; and (b) the conservation and habitat values of the Property as foraging and/or nesting habitat for Swainson's hawks and for other wildlife essential for maintaining Swainson's hawk habitat including the processes which sustain that habitat; which are important public benefits and are consistent with the availability of the Property for wildlife habitat and agriculture. The preservation and protection of these two uses in perpetuity is hereinafter referred to as the "Natural Resource Conservation Purposes" of this Easement.

It is intended that this Easement shall foster agricultural practices on the Property in harmony with the protection and preservation of conservation and habitat values of the Property as foraging and/or nesting habitat for Swainson's hawks and the processes that sustain that habitat. It is intended that each such purpose shall be conducted in a manner consistent with the other. This Easement prohibits use of the Property for any purpose, other than as otherwise allowed in this Easement, that would significantly impair, degrade or interfere with the "Natural Resource Conservation Purposes" stated above.

2. EASEMENT DOCUMENTATION REPORT: The parties acknowledge that an Easement Documentation Report (the "Report") of the Property ("Swainson's Hawk Foraging Habitat Suitability Analysis for the Judy Pond Property Prepared for Conservation Resources, LLC, by Foothill Associates dated October 1, 2015") has been prepared by a competent biologist familiar with the environs and approved by the City and Grantor in writing, a copy of which is on file with the Grantor and the City at their respective address for notices, set forth below. The parties agree that the Report contains an accurate representation of the biological and physical condition of the Property at the time of this grant, and of the historical uses of the Property, including historical water uses. Notwithstanding the foregoing, if a controversy arises with respect to the nature and extent of the physical and biological condition of the Property or the permitted historical uses of the Property, the parties shall not be foreclosed from utilizing any and all other relevant documents, surveys or other evidence or information to assist in the resolution of the controversy.

3. CITY'S RIGHTS: To accomplish the purpose of this Easement, the rights and interests which are conveyed to the City by this Easement include, but are not limited to, the following:

A. Preserve and Protect. The City may preserve and protect forever the Natural Resource Conservation Purposes of the Property.

B. Entry and Access Rights. The City is hereby granted rights of access to enter upon the Property, using appurtenant easements and rights of way, if required for access by City, at reasonable times in order to monitor compliance with and to otherwise enforce the terms of this Easement and to determine whether Grantor's activities are in compliance with the terms hereof. Except in cases where the City determines that immediate entry is required to prevent, terminate, or mitigate a violation of the Easement, such entry shall be upon twenty-four hour prior written notice to Grantor and will not in any case unreasonably interfere with Grantor's use and quiet enjoyment of the Property.

C. Enforcement. The City may prevent any activity on, or use of, the Property that is inconsistent with the terms of this Easement, may enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use and, subject to Section 6,A, below, may enter the Property to take corrective action, including, but not limited to, incurring costs and expenses to restore any areas or features of the Property that may be damaged by any inconsistent activity or use.

D. Signs. No signs shall be erected on the property by the City.

E. Scientific Studies. Subject to Grantor's approval, which approval shall not be unreasonably withheld or denied, the City shall have the right to conduct Swainson's Hawk wildlife studies and associated habitat research on the 36.12-acre Easement Property, as well as monitoring Swainson's Hawk habitat on the 36.12-acre Easement Property, provided that such studies, research, and monitoring shall be carried out in a manner that shall not interfere unreasonably with the permitted use(s) or enjoyment of the Property by Grantor, its successors in interest, or any legally recognized occupant(s) or user(s) of the Property.

4. RESERVED RIGHTS. Grantor reserves all rights accruing from their ownership of the Property, including the right to engage in, or permit others to engage in, all uses of the Property that are not expressly prohibited herein and are not inconsistent with the Natural Resource Conservation Purposes of this Easement. Without limiting the generality of the foregoing, except as prohibited or otherwise limited in Paragraph 5 below and Exhibit D attached hereto and incorporated herein by this reference, Grantor reserves the right to use and enjoy the Property in any manner which is consistent with the Natural Resource Conservation Purposes of this Easement. In that regard, except as provided in Paragraph 5 below and Exhibit D attached hereto and incorporated herein by this reference, the uses set forth in the Report as well as the permitted uses stated in Exhibit C attached hereto and incorporated herein by this reference, though not an exhaustive list of consistent permitted uses, are consistent with this Easement, and shall not be precluded, prevented or limited by this Easement, except for the requirement of prior approval by the City where such approval is required herein.

5. PROHIBITED USES OF THE PROPERTY. Unless undertaken for the purpose of carrying out one of the two Natural Resource Conservation Purposes of this Easement or unless permitted by Exhibit C, any activity on or use of the Property which significantly degrades or interferes with the ability to use the Property for the Natural Resource Conservation Purposes is prohibited. Without limiting the generality of the foregoing, none of the uses described in Exhibit D attached hereto shall be made of the Property. Grantor may not plant any of the plants listed in Exhibit F attached hereto and incorporated herein by this reference on the Property.

6. REMEDIES.

A. Notice of Violation: Corrective Action. If the City becomes aware that as the result of Grantor's use of the Property or Grantor's failure to exercise reasonable care, a violation of the terms of this Easement has occurred or is threatened to occur, the City shall give written notice to the Grantor of such violation and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Property resulting from any use or activity inconsistent with the purpose of this Easement, to restore the portion of the Property so injured. If Grantor fails to cure the violation within thirty (30) days after receipt of notice from the City, or under circumstances where the violation cannot reasonably be cured within a thirty (30) day period, fails to begin curing such violation within the thirty (30) day period and fails to continue diligently to cure such violation until finally cured, the City shall have all remedies available at law or in equity to enforce the terms of this Easement, including, without limitation, (i) the right to seek a temporary or permanent injunction with respect to such activity, (ii) to cause the restoration of that portion of the Property affected by such activity to the condition that existed prior to the undertaking of such prohibited activity, (iii) to recover any damages arising from the violation, to the extent that such damages include monetary amounts paid by the City which, if not paid, could result in the

extinguishment, modification, non-enforcement or impairment of the Easement, and (iv) to recover all reasonable costs and expenses incurred by the City to effect the restoration of the Property. In the event that the nature of any violation is such that the Property cannot be restored, or a court of competent jurisdiction determines that a material violation of the terms of this Easement occurred but nonetheless refuses to order such restoration, the City shall have the right to seek money damages for the diminution in value of this Easement (determined in accordance with Section 14) caused by such violation. The remedies described in this paragraph shall be cumulative and shall be in addition to all remedies hereafter existing at law or in equity.

B. Cost of Enforcement. In any action, suit or other proceeding undertaken to enforce the provisions of this Easement, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs and expenses including attorneys' fees, and if such prevailing party shall recover judgment in any action or proceeding, such costs and expenses shall be included as part of the judgment. In addition, any costs of restoration shall be borne by the Grantor.

C. Emergency Enforcement. If the City, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the protected values of the Property, the City may pursue its remedies under this paragraph without prior notice to Grantor or without waiting for the period to cure to expire.

D. Non-Waiver. Enforcement of the terms and provisions of this Easement shall be at the discretion of the City, and the failure of the City to discover a violation or to take action under this paragraph shall not be deemed or construed to be a waiver of the City's rights hereunder with respect to such violation in the event of any subsequent breach.

E. Acts Beyond Grantor's Control. Nothing contained in this Easement shall be construed to entitle the City to bring any action against Grantor for any injury to or change in the Property resulting from causes beyond Grantor's control, including fire, flood, storm, and earth movement, or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the property resulting from such causes.

F. Third-Party Beneficiary Enforcement. It is understood by the Grantor that all rights and remedies conveyed under this Conservation Easement shall extend to and are enforceable against Grantor by the California Department of Fish and Wildlife ("CDFW") as a third-party beneficiary, provided, however, that such status as a third-party beneficiary is personal to CDFW and may not be assigned or conveyed to any other entity.

G. Agent for Enforcement. Without the prior consent of the Grantor, the City may appoint any person or entity as the City's agent for enforcing the terms of this Easement, and the Grantor shall be entitled to treat any such person or entity as the City's agent for enforcement, provided such person or entity presents written proof of such authority signed by the City.

7. TRANSFER. The City may transfer all or any of its interests in this Easement, provided that (1) the City or any successor holder of this Easement obtains the prior written consent of the CDFW; and (2) any transfer shall be made only to an organization qualified at the time of the transfer as an eligible donee under Internal Revenue Code Section 170(h)(3) or its successor, or any regulation issued thereunder, and such organization shall be an entity qualified pursuant to Civil Code Section 815 et seq. or any subsequent state law governing the creation, transfer and enforcement of conservation easements.

8. RUNNING WITH THE LAND. The Easement created by this Grant Deed shall burden and run with the Property forever. Every provision of this Easement that applies to the Grantor or the City shall also apply forever to and shall burden or benefit, as applicable, their respective agents, heirs, devisees, administrators, employees, personal representatives, lessees, and assigns, and all other successors as

their interest may appear. The Grantor and the City agree that transfer by Grantor of any interest in the Property shall be in accordance with the terms of Paragraph 9 of Exhibit C hereto.

9. REPRESENTATION AND WARRANTIES.

A. Hazardous Materials. Grantor discloses to City that the Property has historically been used for agricultural purposes and will continue to be so used and, accordingly, fertilizers, pesticides and other substances historically used in such practices and typically used in such practices, have been, and may be, on the Property. Subject to the foregoing, Grantor represents and warrants that to the best of Grantor's knowledge, the Property (including, without limitation, any associated air, soil, groundwater, and surface water) is free of any conditions that individually or in aggregate (1) pose a significant risk to human health or the environment; (2) violate any Environmental Law, as that term is defined below in Paragraph 15; or (3) could reasonably be expected to cause any person to incur environmental investigation, removal, remediation, or other cleanup costs. Except as listed in Exhibit E attached hereto and incorporated herein by this reference, there are no known underground tanks located on the Property. Grantor represents and warrants that Grantor shall comply with all Environmental Laws in using the Property and that Grantor shall keep the Property free of any material environmental defect, including, without limitation, contamination from Hazardous Materials, as that term is defined below in Paragraph 15.

B. State of Title. Subject to matters of record disclosed in that certain Preliminary Title Report dated June 6, 2018, issued by Stewart Title of Sacramento regarding the Property, Grantor warrants that as of the date that title to the Easement transfers it has good and sufficient title to the Property and that all mortgages, liens, and encumbrances are subordinated to this Easement.

C. Compliance with Laws. Grantor has not received notice of and has no knowledge of any material violation of any federal, state, county or other governmental or quasi-governmental statute, ordinance, regulation, law or administrative or judicial order with respect to the Property.

D. No Litigation. There is no action, suit or proceeding which is pending or threatened against the Property or any portion thereof relating to or arising out of the ownership or use of the Property, or any portion thereof, in any court or in any federal, state, county, or municipal department, commission, board, bureau, agency or other governmental instrumentality.

E. Authority To Execute Easement. The person executing this Easement on behalf of the City represents that execution of this Easement has been duly authorized by the City. The person(s) executing this Easement on behalf of the Grantor represents that the execution of this Easement has been duly authorized by the Grantor.

10. COSTS, LEGAL REQUIREMENTS, AND LIABILITIES. Grantor retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of all interests in the Property retained by Grantor and agrees that the City shall have no duty or responsibility for the operation or maintenance of the Property, the monitoring of hazardous conditions thereon, or the protection of Grantor, the public, or any third parties from risks relating to conditions on the Property. Nothing in this Section shall obligate Grantor for any costs of monitoring this Easement. Grantor agrees to pay any and all real property taxes and assessments levied by competent authority on the interest in the Property retained by Grantor before delinquency and that Grantor shall keep the City's interest in the Property free of any liens arising out of any work performed for, materials furnished to or obligations incurred by or on behalf of Grantor. Grantor shall be solely responsible for any costs related to the maintenance of general liability insurance covering acts on the Property. Grantor remains solely responsible for obtaining any applicable governmental permits and approvals for any activity or use permitted by this Easement, and any activity or use shall be undertaken in accordance with all applicable federal, state, and local laws, regulations, and requirements.

11. INDEMNIFICATION BY GRANTOR. Notwithstanding any other provision herein to the contrary, Grantor hereby agrees to indemnify, defend, and hold harmless the City, its members, directors, officers, employees, agents, and contractors and their heirs and assigns (the "**Indemnified Parties**") from and against any costs, liabilities, penalties, damages, claims or expenses (including reasonable attorneys' fees) which the Indemnified Parties may suffer or incur as a result of or arising out of the activities of the Grantor on the Property, except as such claim, liability, damage, or expense is the result of the City's gross negligence or intentional misconduct. Without limiting the foregoing, Grantor shall indemnify, defend, and hold harmless the Indemnified Parties for all of the following:

A. Third Party Claims. Any claim, liability, damage, or expense suffered or incurred by or threatened against Grantor by any other person or entity, except as such claim, liability, damage, or expense is the result of the City's gross negligence or intentional misconduct.

B. Taxes. Any real property taxes, insurance, utilities or assessments that are levied against the interest in the Property retained by Grantor, including those for which exemption cannot be obtained, or any other costs in maintaining the Property.

C. Hazardous Materials. Other than as disclosed by Grantor in Section 9.A. regarding the historic uses of the Property, any Hazardous Material, as that term is defined in Paragraph 15, present, alleged to be present, or otherwise connected in any way to the Property, whether by or after the date of this Easement.

12. NOTICE; APPROVAL.

A. Notice for Entry. Except in the event of emergency, where notice to Grantor of the City's entry upon Property is required herein, the City shall notify any of the persons constituting Grantor or their authorized agents by telephone or in person, or by written notice in the manner described below in subparagraph C, prior to such entry.

B. Other Notice. Except as provided in subparagraph A above, whenever express approval, agreement or consent is required by this document, the initiating party shall give written notice, in the manner described below in subparagraph C, and detailed information to the other party. The receiving party shall review the proposed activity and notify the initiating party, within five (5) working-days after receipt of notice of any objections to such activity. Any objections by a party shall be based upon its opinion that the proposed activity is inconsistent with the terms of this Easement.

C. Written Notices. Except as set forth in Subsection A above, any written notice called for in this Easement may be delivered (1) in person; (2) by certified mail, return receipt requested, postage paid; (3) by facsimile with the original deposited with the United States Post office, postage prepaid on the same date as sent by facsimile; or (4) by a reputable overnight courier that guarantees next day delivery and provided a receipt, and addressed as follows:

To the Grantor:

Judith Pond 2012 Trust
Attn: Judith Pond
P.O Box 47
Wilton, CA 95693

To City: Planning Director
City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

with a copy to: Regional Manager
Region 2
California Department of Fish and Wildlife
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Either party may, from time to time, by written notice to the other, designate a different address which shall be substituted for the one above specified. Notice is deemed to be given upon receipt or refusal.

13. SEVERABILITY AND ENFORCEABILITY. The terms and purposes of this Easement are intended to be perpetual. If any provision or purpose of this Easement or the application hereof to any person or circumstance is found to be invalid, the remainder of the provisions and purposes of this Easement, and the application of such provision or purpose to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

14. VALUATION. Grantor and the City agree that this grant of a perpetual Easement gives rise to a property right, immediately vested in the City, which for purposes of this Paragraph, the parties stipulate to have a fair market value of the greater of:

A. $342,000 which is the product obtained when the per acre value paid to the grantor of this Easement for the purchase of this easement is multiplied by 36.12, the total number of protected acres of the Property; or

B. The number obtained by multiplying (1) the fair market value of the Property unencumbered by this Easement (minus any increase in value after the date of this grant attributable to improvements) by (2) [x/y, which is] the ratio of the value of the Easement at the time of this grant to the value of the Property, without the deduction for the value of the Easement. The values at the time of this grant are those values used to calculate the deduction for federal income tax purposes allowable by reason of this grant, pursuant to Section 170(h) of the Internal Revenue Code. For purposes of this Paragraph, the ratio of the value of the Easement to the value of the Property unencumbered by the Easement shall remain constant.

If for any reason there is an extinguishment of the restrictions of this Easement other than a voluntary surrender or extinguishment by the City, the City, on subsequent sale, exchange, or taking of the Property, shall be entitled to a portion of the proceeds at least equal to the amount determined in accordance with this Paragraph. If such extinguishment occurs with respect to fewer than all acres of the Property, the amounts described above shall be calculated based on the actual number of acres subject to extinguishment.

In compliance with the terms of Chapter 16.130 of the Elk Grove Municipal Code (Swainson's Hawk Impact Mitigation Fees), a monitoring endowment in the amount of $34,200, representing 10% of the easement purchase cost shall be submitted to the City prior to the recordation of this Easement.

15. INTERPRETATION

A. Liberally Construed. It is the intent of this Easement to preserve the condition of the Property and each of the Natural Resource Conservation Purposes protected herein,

notwithstanding economic or other hardship or changes in surrounding conditions. The provisions of this Easement shall be liberally construed to effectuate the perpetual purposes of preserving and protecting the agricultural and Swainson's hawk habitat purposes described above, and allowing Grantor's use and enjoyment of the Property to the extent consistent with those purposes. Liberal construction is expressly required for purposes of effectuating this Easement in perpetuity, notwithstanding changed conditions of any kind. The Natural Resource Conservation Purposes herein are the intended best and most productive use of the Property. Subject to the limitations set forth in this Easement on the City's right to seek monetary damages, no remedy or election given by any provision in this Easement shall be deemed exclusive unless so indicated, but it shall, wherever possible, be cumulative with all other remedies at law or in equity. The parties acknowledge that each party and its counsel have reviewed and revised this Easement and that no rule of construction that ambiguities are to be resolved against the drafting party shall be employed in the interpretation of this Easement. In the event of any conflict between the provisions of this Easement and the provisions of any use and zoning restrictions of the State of California, the City in which the Property is located, or any other governmental entity with jurisdiction, the more restrictive provisions shall apply.

B. Governing Law. This Easement shall be interpreted in accordance with the laws of the State of California, and shall be subject to the provisions of Civil Code section 815 et seq. or any subsequent State law governing the creation, transfer and enforcement of conservation easements.

C. Captions. The captions have been inserted solely for convenience of reference and are not part of the Easement and shall have no effect upon construction or interpretation.

D. No Hazardous Materials Liability. Notwithstanding any other provision herein to the contrary, the parties do not intend this Easement to be construed such that it creates in or gives to the City:

(a) the obligations or liabilities of an "owner" or "operator" as those words are defined and used in environmental laws, as defined below, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 USC § 9601 et seq. and hereinafter "CERCLA");

(b) the obligations or liabilities of a person described in 42 USC §9607(a);

(c) the obligations of a responsible person under any applicable Environmental Laws, as defined below;

(d) the right to investigate and remediate any Hazardous Materials, as defined below, associated with the Property; or

(e) any control over Grantor's ability to investigate, remove, remediate or otherwise cleanup any hazardous material associated with the Property.

E. Definitions.

(a) The terms "Grantor" and "City", wherever used in this Easement and any pronouns used in place thereof, shall mean and include, respectively, the above-named Grantor, its personal representatives, heirs, devisee, personal representatives, and assigns, and all other successors as their interest may appear and the City and its successors and assigns.

(b) The term "Hazardous Materials" includes, without limitation, (a) material that is flammable, explosive, or radioactive; (b) petroleum products; and (c) hazardous wastes,

hazardous or toxic substances, or related materials defined in the CERCLA (42 USC 9601 et seq.), the Hazardous Materials Transportation Act (49 USC §6901 et seq.), the Hazardous Waste Control Law (Cal. Health & Safety Code §25100 et seq.), the Hazardous Substance Account Act (Cal. Health & Safety Code §25300 et seq.), and in the regulations adopted and publications promulgated pursuant to them, or any other applicable federal, state, or local laws, ordinances, rules, or regulations now in effect or enacted after this date.

(c) The term "Environmental Laws" includes, without limitation, any federal, state, local, or administrative agency statute, regulation, rule, ordinance, order or requirement relating to pollution, protection of human health, the environment or Hazardous Materials.

16. CONDEMNATION. If all or part of the property is taken in exercise of eminent domain by public, corporate, or other authority so as to abrogate the restrictions imposed by this Easement, the Grantor and the City shall join in appropriate actions at the time of such taking to recover the full value of the taking and all incidental or direct damages resulting from the taking, which proceeds shall be divided in accordance with the value of City's and Grantor's interests as determined in accordance with the provisions of Paragraph 14 above, it being expressly agreed that this Easement constitutes a compensable property right. All expenses incurred by the Grantor and the City in such action shall be paid out of the recovered proceeds.

17. SUBSEQUENT LIENS ON PROPERTY. No provision of the Easement should be construed as impairing the ability of Grantor to use this Property as collateral for subsequent borrowing, provided that any mortgage, lien, or encumbrance arising from such a borrowing shall be subordinated to the Easement.

18. RE-RECORDING. Grantor agrees to execute all documents and instruments reasonably necessary and requested by the City to assure the perpetual enforceability of this Easement.

19. ACCESS. Nothing contained in this Easement shall give or grant to the public a right to enter upon or use the Property or any portion thereof where no such right existed in the public immediately prior to the execution of this Easement.

20. ENTIRE AGREEMENT. This Easement, together with the attached exhibits and schedules, and any documents incorporated herein by reference, constitutes the entire agreement of the parties with respect to the subject matter hereof, and supersedes all prior agreement and understandings of the parties.

IN WITNESS WHEREOF, the parties have executed this Easement as of the date first above written.

GRANTOR:

Judith E. Pond 2012 Trust dated August 13, 2012

By: _____
Judith E. Pond
Trustee

CITY:

City of Elk Grove, a municipal corporation

BY: _____
Jason Behrmann
Interim City Manager

APPROVED AS TO FORM:

_____
Jonathan P. Hobbs
City Attorney

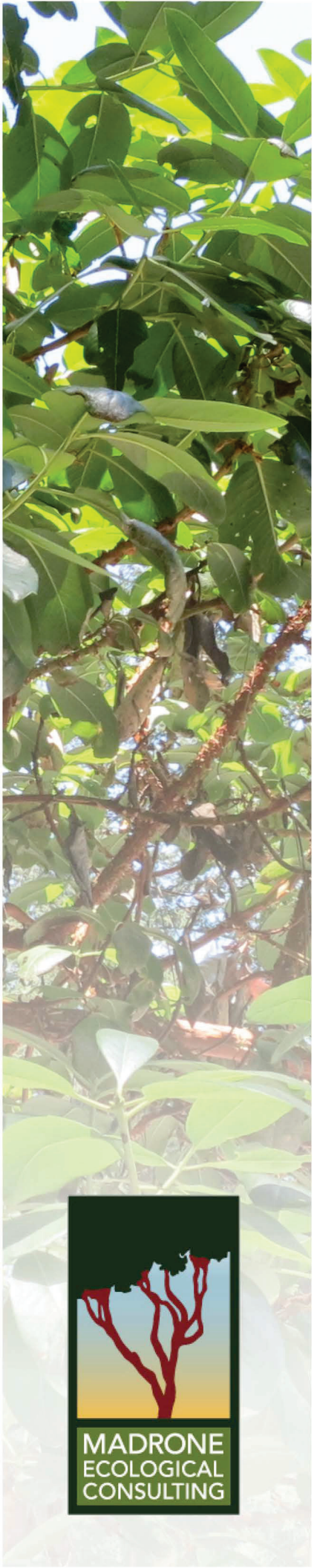
ATTEST TO:

_____
Jason Lindgren
City Clerk
Dated: November 8, 2018

CITY OF ELK GROVE INCORPORATED July 1, 2000 STATE OF CALIFORNIA

APPENDIX D

SPECIAL-STATUS PLANT SURVEY REPORT



Special-Status Plant Survey Report

Milestone II

Elk Grove, Sacramento County, California

May 2025

MADRONE ECOLOGICAL CONSULTING

Prepared for:
Taylor Morrison
1478 Stone Point Drive, Suite 100
Roseville, CA 95661

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2025. *Special-Status Plant Survey Report for Milestone II*. Prepared for Taylor Morrison. Published on 9 May 2025.

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Milestone II

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Attachment B: Target Plant Species Reference Population Information

Attachment C: Plant Species Observed within the Milestone II Study Area

1.0 INTRODUCTION

This report presents the results of a special-status plant survey conducted for the approximately 9.9-acre Milestone II (Study Area). The 9.9-acre Study Area is located at the northwest corner of Wayne Heintz Street and Wyland Drive in the City of Elk Grove, Sacramento County, California. The Study Area is located in a portion of Section 5, Township 6 North, Range 6 East (MDB&M) as shown on the "Elk Grove, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2022) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) biologist Daria Snider conducted a special-status plant survey of the Study Area on 11 April 2025. The special-status plant survey was conducted in accordance with the U.S. Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000), California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), and the *CNPS Botanical Survey Guidelines* (CNPS 2001).

A list of special-status plant species with potential to occur within the Study Area was developed by reviewing the following literature, and then refining the list based on habitats present within the Study Area:

- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2025a) query of CRPR Lists 1A, 1B, 2A, 2B, and 3 within the "Elk Grove, California" USGS and eight surrounding quadrangles;
- the California Natural Diversity Database occurrences of special-status plant species within five miles of the Study Area (CNDDB 2025).

Only one target species was identified for this survey; dwarf downingia (*Downingia pusilla*).

Meandering pedestrian surveys were conducted throughout the Study Area. The surveys were floristic in nature, which means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. Plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2025). Vegetation communities were classified according to the *Manual of California Vegetation, Second Edition* as updated online (CNPS 2025b). Qualifications for the biologists that conducted the survey are included in **Attachment A,** a list of reference populations of target plants visited is included in **Attachment B**, and a comprehensive list of all plant species observed during surveys of the Study Area is included in **Attachment C**.

3.0 EXISTING SITE CONDITIONS

The Study Area is a graded lot occupied by non-native annual grassland. Interspersed across the site are a number of residual stockpiles, divots from heavy equipment excavation, and relict roadways. This property

was fully graded and used as a staging area for construction of the surrounding development in 2018, and evidence of this activity is visible throughout the Study Area.

The Study Area is situated at approximately 50 feet above mean sea level. It is bounded to the south and east by concrete sidewalks adjacent to Wayne Heintz Street and Wyland Drive and is bounded to the west and north by urban residential lots.

3.1 Annual Grassland

The annual grassland is dominated by wild oat (*Avena fatua*), perennial ryegrass (*Festuca perennis*) and Mediterranean barley (*Hordeum marinum*). Other plant species commonly occurring throughout the annual grassland on-site include spring vetch (*Vicia sativa*), black mustard (*Brassica nigra*), curly dock (*Rumex crispus*), miniature lupine (*Lupinus bicolor*), soft brome (*Bromus hordeaceus*), prickly wild lettuce (*Lactuca serriola*), bindweed (*Convolvulus arvensis*), wild radish (*Raphanus sativus*), common willowherb (*Epilobium brachycarpum*), broad-leaved pepperweed (*Lepidium latifolium*), and hairy cat's ear (*Leontodon taraxacoides*). In additional, some mesic areas on the site along relict roadways and in residual depressions from heavy equipment support varying amounts of Mediterranean barley (*Hordeum marinum*), perennial ryegrass, toad rush (*Juncus bufonius*), cursed buttercup (*Ranunculus sardous*), Fitch's spikeweed (*Centromadia fitchii*), rough cat's ear, hyssop loosestrife (*Lythrum hyssopifolium*), slender popcorn flower (*Plagiobothrys stipitatus*), and water montia (*Montia fontana*).

3.2 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2025), two soil mapping units occur within the Study Area (**Figure 2**): (213) San Joaquin silt loam, leveled, 0 to 1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0 to 1 percent slopes. These soils are primarily acidic loams (NRCS 2025). Alkaline soils do not occur within the Study Area.

4.0 SURVEY RESULTS

4.1 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 2B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and mesic valley and foothill grassland habitats at elevations ranging from five to 1,460 feet (CNPS 2025a). Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May.

The mesic areas within the Study Area represent marginally suitable habitat for this species. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

5.0 CONCLUSION

No special-status plant species were observed during the 2025 protocol-level special-status plant surveys of the Milestone II Study Area.

6.0 REFERENCES

California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. State of California Natural Resource Agency Department of Fish and Wildlife. Dated 20 March 2018. Website https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959 [Accessed January through May 2022].

California Native Plant Society (CNPS). 2001. *CNPS botanical survey guidelines*. Pages 38-40 in California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (D.P. Tibor, editor). Sixth edition. Special Publication No. 1, California Native Plant Society, Sacramento, 387 pp.

California Native Plant Society (CNPS). 2025a. *Inventory of Rare and Endangered Plants (online edition, v9.5)*. California Native Plant Society, Sacramento, CA. Website: http://www.rareplants.cnps.org [Accessed January through May 2025].

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California Natural Diversity Database (CNDDB). 2025 *RareFind 6*. California Department of Fish and Wildlife. Accessed January 2025.

Jepson Flora Project (eds.) 2025. *Jepson eFlora*. Website: http://ucjeps.berkeley.edu/eflora/ [Accessed March through May 2025].

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2025. *Soil Survey Geographic (SSURGO) Database for Sacramento County, California* [Accessed January 2025].

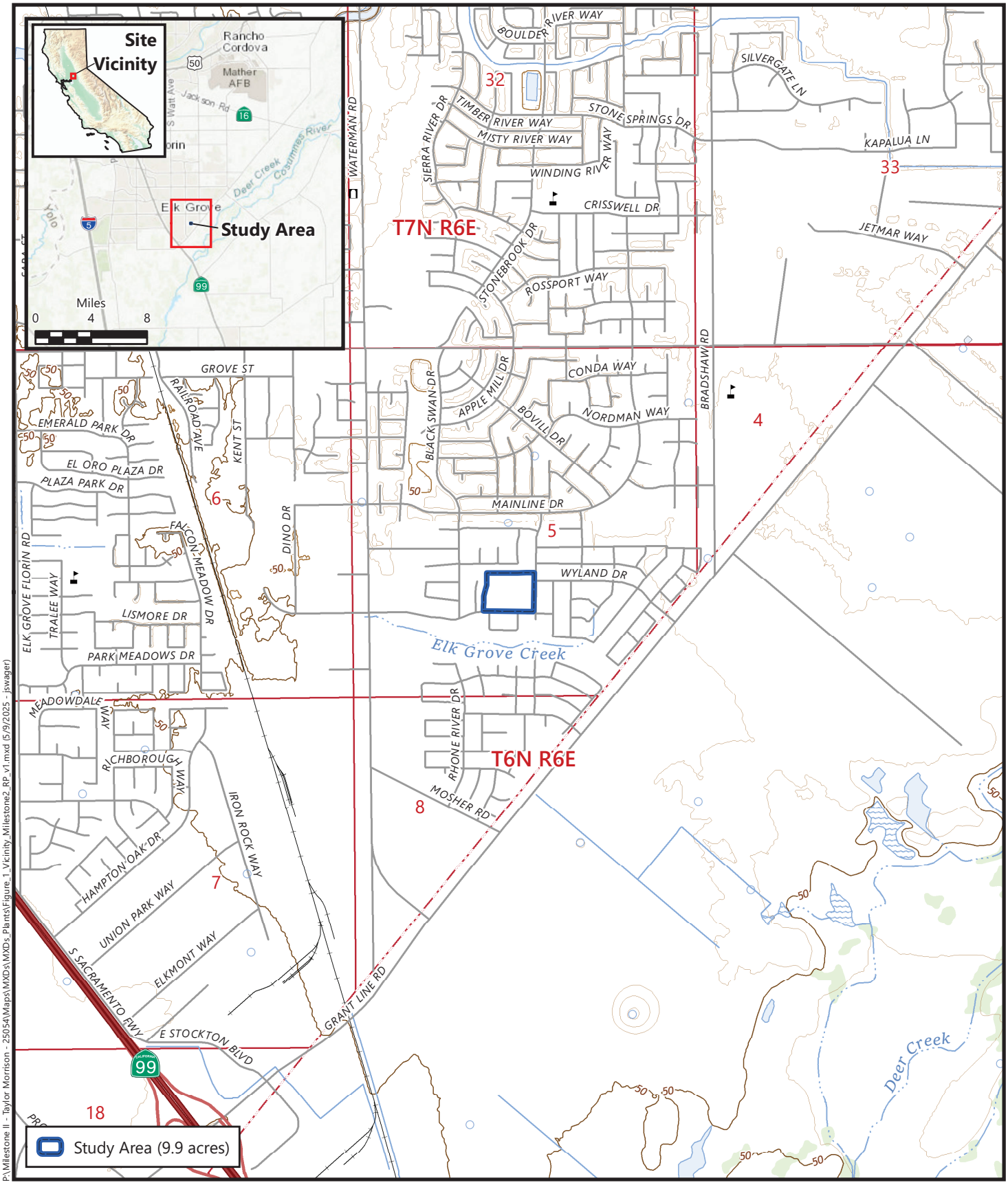
U.S. Geological Survey (USGS). 2022. "*Elk Grove, California*" 7.5-Minute Series Topographic Quadrangle. U.S. Geological Survey. Denver, Colorado.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2000. *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*. Sacramento, CA.

Figures

Figure 1. Site and Vicinity Map

Figure 2. Natural Resources Conservation Service Soils



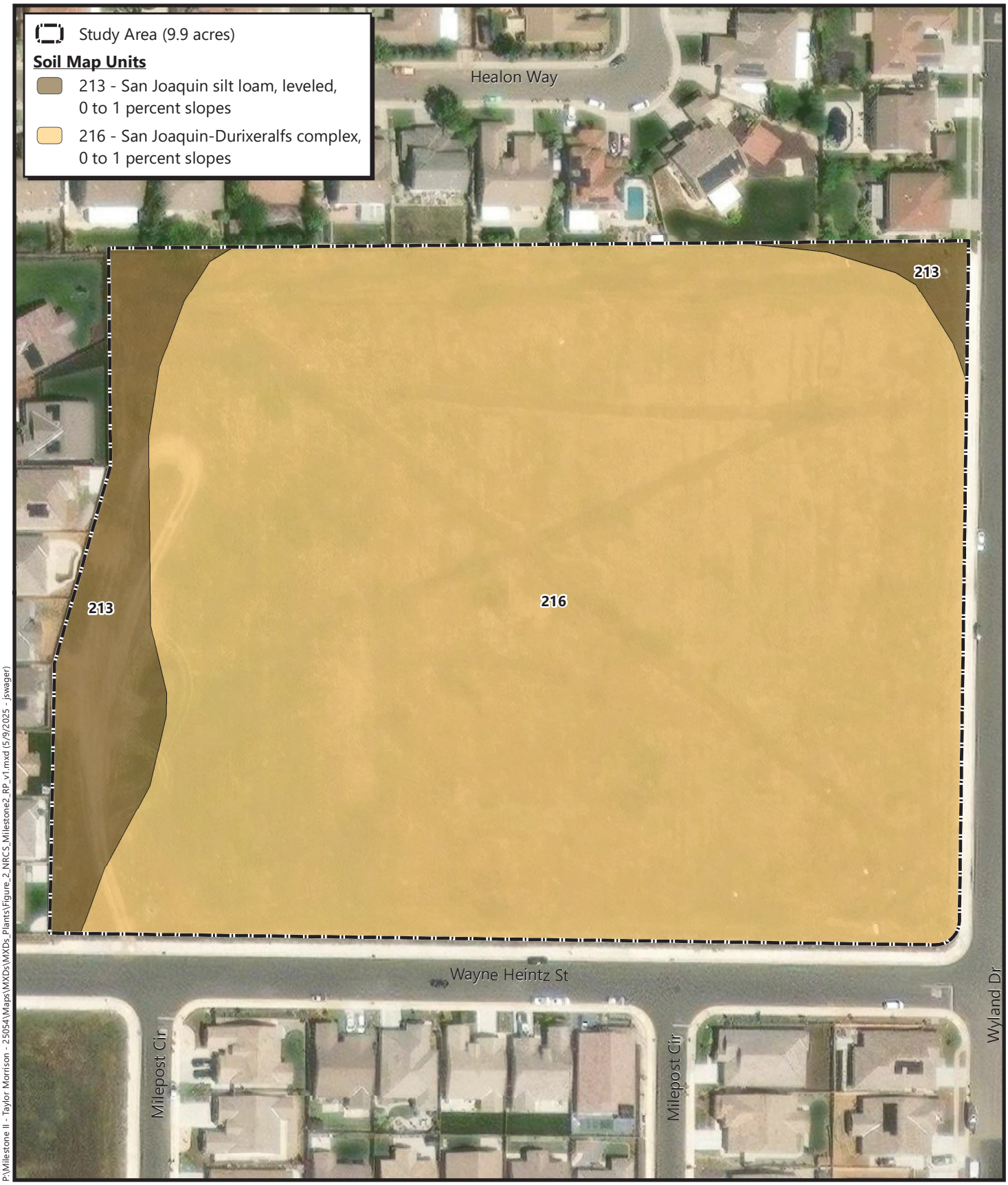
P:\Milestone II - Taylor Morrison - 25054\Maps\MXDs\MXDs_Plants\Figure_1_Vicinity_Milestone2_RP_v1.mxd (5/9/2025 - jswager)

Source: United States Geologic Survey, 2022
"Elk Grove, California" 7.5-Minute Topographic Quadrangle
Section 5, Township 6 North, Range 6 East, MDBM
Latitude (NAD83): 38.398864°, Longitude (NAD83): -121.345533°

Figure 1
Site and Vicinity

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING



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N

Feet
0 50 100

Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for Sacramento County, California*
Aerial Source: Maxar, 26 April 2022

Figure 2
Natural Resources Conservation Service Soils

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A: Botanist Qualifications

Attachment B: Target Plant Species Reference Population Information

Attachment C: Plant Species Observed within the Milestone II Study Area

Attachment A

Botanist Qualifications

Special-Status Plant Survey Botanist Qualifications

Daria Snider

Ms. Snider has more than 20 years of experience conducting botanical inventories. As a senior biologist, she specializes in rare plant surveys, wetland delineations, and general biological resource inventories. In addition to rare plant surveys, her botanical experience includes general vegetation surveys, aerial and field vegetation mapping, Certified Arborist tree inventories, CRAM Assessments, floristic monitoring, and invasive species identification and mapping. Ms. Snider's experience includes a wide variety of habitat types, including vernal pools, annual grasslands, oak woodland, riparian communities, coastal sage scrub, chaparral, cismontane and montane forests, and desert. Her geographic expertise covers much of California, from Shasta County in the north to the Mojave Desert and San Gabriel Mountains in the south, and from Sonoma County in the west to the Sierra Nevada foothills and mountains in the east. Her primary focus is on the Sacramento Valley and the adjacent Sierra Nevada foothills.

Attachment B

Target Plant Species
Reference Population Information

Target Plant Species Reference Population Information
for the Milestone II
Special-Status Plant Survey

Plant Species	Location of Reference Population	Date of Visit	Phenology of Reference Population/ Distinctive Characteristics
Downingia pusilla Dwarf downingia	Woodcreek Oaks Open Space Preserve (CNDDB #142)	7 April 2025	Plants are in early bloom. The number of plants in this pool is similar to prior years, but they are in a deeper location in the pool than observed in the past.

Attachment C

Plant Species Observed within the Milestone II Study Area

Plant Species Observed within the Milestone II Study Area 11 April 2025

Family / Species Name	Common Name	Native / Non-Native
ASTERACEAE		
Baccharis pilularis	Coyote brush	Native
Centaurea solstitialis	Yellow star-thistle	Non-Native
Centromadia fitchii	Fitch's spikeweed	Native
Hypochaeris glabra	Smooth cat's-ear	Non-Native
Lactuca serriola	Prickly lettuce	Non-Native
Leontodon saxatilis	Hairy hawkbit	Non-Native
Silybum marianum	Milk thistle	Non-Native
Sonchus asper subsp. asper	Prickly sow thistle	Non-Native
BORAGINACEAE		
Amsinckia intermedia	Common fiddleneck	Native
Amsinckia retrorsa	Rigid fiddleneck	Native
Plagiobothrys stipitatus var. micranthus	Slender popcornflower	Native
BRASSICACEAE		
Brassica nigra	Black mustard	Non-Native
Lepidium latifolium	Perennial pepperweed	Non-Native
Raphanus sativus	Radish	Non-Native
CARYOPHYLLACEAE		
Cerastium glomeratum	Sticky mouse-ear chickweed	Non-Native
Spergula arvensis	Corn spurrey	Non-Native
CONVOLVULACEAE		
Convolvulus arvensis	Bindweed	Non-Native
FABACEAE		
Lupinus bicolor	Miniature lupine	Native
Medicago polymorpha	California burclover	Non-Native
Trifolium dubium	Little hop clover	Non-Native
Trifolium glomeratum	Clustered clover	Non-Native
Trifolium hybridum	Alsike clover	Non-Native
Vicia benghalensis	Purple vetch	Non-Native
Vicia sativa	Spring vetch	Non-Native

Plant Species Observed within the Milestone II Study Area 11 April 2025

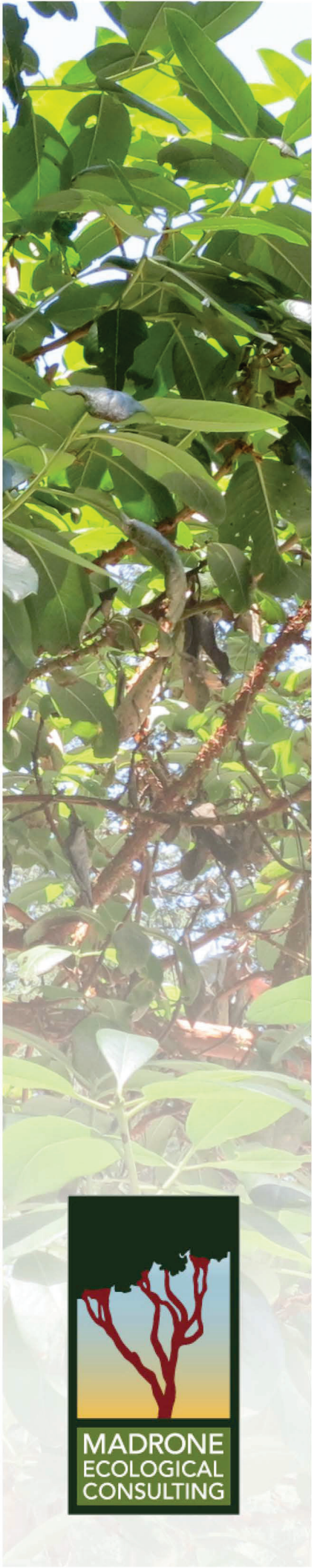
Family / Species Name	Common Name	Native / Non-Native
GERANIACEAE		
Erodium botrys	Filaree	Non-Native
Geranium dissectum	Cut-leaf geranium	Non-Native
JUNCACEAE		
Juncus bufonius	Toad rush	Native
LYTHRACEAE		
Lythrum hyssopifolia	Hyssop loosestrife	Non-Native
MONTIACEAE		
Calandrinia menziesii	Red maids	Native
Montia fontana	Water chickweed, blinks	Native
MYRSINACEAE		
Lysimachia arvensis	Scarlet pimpernel	Non-Native
ONAGRACEAE		
Epilobium brachycarpum	Willowherb	Native
OROBANCHACEAE		
Triphysaria versicolor subsp. faucibarbata	Yellow owl's clover	Native
PLANTAGINACEAE		
Plantago lanceolata	English plantain	Non-Native
Veronica peregrina subsp. xalapensis	Purslane speedwell	Native
POACEAE		
Avena fatua	Wild oat	Non-Native
Briza minor	Annual quaking grass	Non-Native
Bromus diandrus	Ripgut grass	Non-Native
Bromus hordeaceus	Soft chess	Non-Native
Festuca bromoides	Brome fescue	Non-Native
Festuca perennis	Rye grass	Non-Native
Hordeum marinum subsp. gussoneanum	Mediterranean barley	Non-Native
Hordeum murinum	Wall barley	Non-Native

Plant Species Observed within the Milestone II Study Area 11 April 2025

Family / Species Name	Common Name	Native / Non-Native
POLYGONACEAE		
Rumex conglomeratus	Green dock	Non-Native
Rumex crispus	Curly dock	Non-Native
RANUNCULACEAE		
Ranunculus muricatus	Spiny-fruit buttercup	Non-Native
Ranunculus sardous	Cursed buttercup	Non-Native
SALICACEAE		
Populus fremontii subsp. fremontii	Fremont cottonwood	Native

APPENDIX E

AQUATIC RESOURCES DELINEATION REPORT



Aquatic Resources Delineation Report

Milestone II

Elk Grove, Sacramento County, California

May 2025

MADRONE ECOLOGICAL CONSULTING

Prepared for:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2025. *Aquatic Resources Delineation Report for Milestone II.* Prepared for Raney Planning & Management, Inc. Published on 8 May 2025.

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Milestone II

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2.0 METHODOLOGY ____ **2**

3.0 EXISTING CONDITIONS ____ **2**

3.1 Soils **3**

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Figure 3. Wetland Determination Data Point Locations

Attachments:

Attachment A. Nationwide Permit Authorization for Crooked Creek Estates East
Attachment B. Arid West Wetland Determination Data Forms

1.0 INTRODUCTION

This report presents the results of a delineation of aquatic resources within the Milestone II property (Study Area) conducted by Madrone Ecological Consulting, LLC (Madrone). The 9.9-acre Study Area is located at the northwest corner of Wayne Heintz Street and Wyland Drive in the City of Elk Grove, Sacramento County, California. The Study Area is located in a portion of Section 5, Township 6 North, Range 6 East (MDB&M) as shown on the "Elk Grove, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2022) (**Figure 1**).

2.0 METHODOLOGY

Madrone senior biologist Daria Snider conducted a delineation of aquatic resources within the Study Area on 11 April 2025. Data points were mapped in the field with a GPS unit capable of sub-meter accuracy (Arrow 100). Three-parameter data (vegetation, soils, and hydrology) were collected at each data point, documenting wetland/waters or upland status, as appropriate. The GPS data was overlayed on an ortho-rectified aerial photograph (Maxar 2022).

The delineation was performed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (USACE 2016b). U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. The most recent *National Wetland Plant List* (USACE 2022) was used to determine the wetland indicator status of plants observed in the Study Area. The *Jepson eFlora* (Jepson Flora Project 2022) was used for plant nomenclature.

3.0 EXISTING CONDITIONS

The Study Area is a graded lot occupied by non-native annual grassland. Interspersed across the site are a number of residual stockpiles, divots from heavy equipment excavation, and relict roadways. This property was fully graded and used as a staging area for construction of the surrounding development in 2018, and evidence of this activity is visible throughout the Study Area. The Study Area is situated at approximately 50 feet above mean sea level. It is bounded to the south and east by concrete sidewalks adjacent to Wayne Heintz Street and Wyland Drive and is bounded to the west and north by urban residential lots.

The annual grassland is dominated by wild oat (*Avena fatua*), perennial ryegrass (*Festuca perennis*) and Mediterranean barley (*Hordeum marinum*). Other plant species commonly occurring throughout the annual grassland on-site include spring vetch (*Vicia sativa*), black mustard (*Brassica nigra*), curly dock (*Rumex crispus*), miniature lupine (*Lupinus bicolor*), soft brome (*Bromus hordeaceus*), prickly wild lettuce (*Lactuca serriola*), bindweed (*Convolvulus arvensis*), wild radish (*Raphanus sativus*), common willowherb (*Epilobium*

brachycarpum), broad-leaved pepperweed (*Lepidium latifolium*), and hairy cat's ear (*Leontodon taraxacoides*). In additional, some mesic areas on the site along relict roadways and in residual depressions from heavy equipment support varying amounts of Mediterranean barley (*Hordeum marinum*), perennial ryegrass, toad rush (*Juncus bufonius*), cursed buttercup (*Ranunculus sardous*), Fitch's spikeweed (*Centromadia fitchii*), rough cat's ear, hyssop loosestrife (*Lythrum hyssopifolium*), slender popcorn flower (Plagiobothrys stipitatus), and water montia (*Montia fontana*).

3.1 Soils

The Natural Resources Conservation Service (NRCS) has mapped two soil units within the Study Area (**Figure 2**) (NRCS 2025): (213) San Joaquin silt loam, leveled, 0 to 1 percent slopes and (216) San Joaquin-Durixeralfs complex, 0 to 1 percent slopes. These soils are primarily acidic loams (NRCS 2025). Alkaline soils do not occur within the Study Area.

4.0 RESULTS

The Study Area is located within the previously permitted and mitigated Crooked Creek East project area. The USACE Nationwide Permit Authorization is included as **Attachment A**. Included in the permit authorization is a map showing no aquatic resources within the Milestone II Study Area. As noted above, the Study Area was graded and used as a staging area for construction of the surrounding development, and when that construction was complete, a number of depressions remained. Some of those depressions are now occupied by some wetland plant species, as described in **Section 3.0** above. Four data points were taken in representative depressions on the site, including those that appeared the deepest and were occupied by the most hydrophytic species (locations are displayed on **Figure 3**). Although all four data point locations were dominated by hydrophytic vegetation, each of the locations was lacking either wetland hydrology indicators, hydric soil indicators, or both (the completed data sheets are included in **Attachment B**). As none of these locations qualified as wetlands or other waters of the U.S., no aquatic resources are present within the Study Area.

5.0 CONCLUSION

No aquatic resources are present within the Study Area.

6.0 REFERENCES

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

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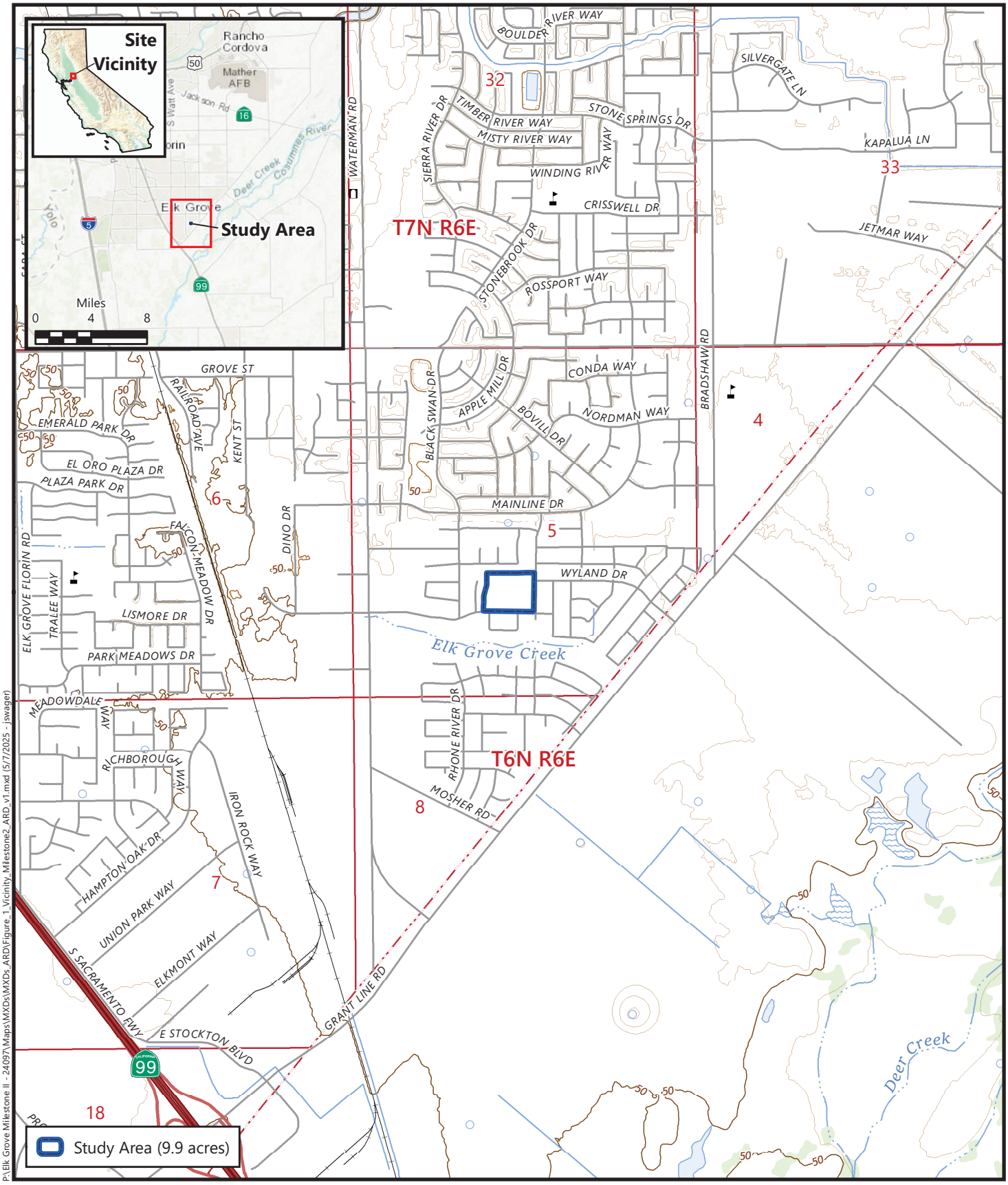
Figures

Figure 1. Vicinity Map

Figure 2. Natural Resources Conservation Service Soils

Figure 3. Aquatic Resources



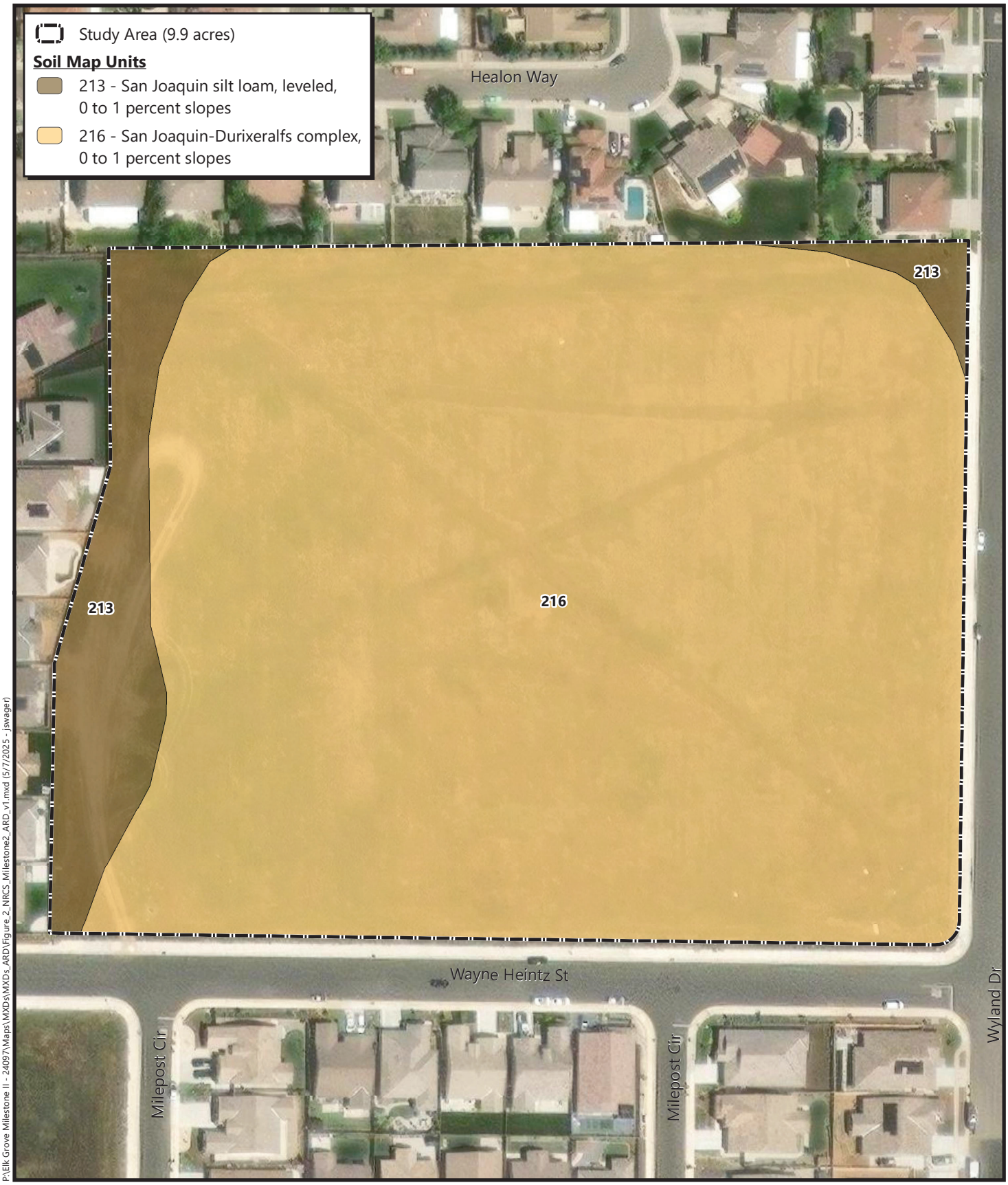
P:\Elk Grove Milestone II - 24097\Maps\MXDs\MXDs_ARD\Figure_1_Vicinity_Milestone2_ARD_v1.mxd (5/7/2025 - jswager)

Source: United States Geologic Survey, 2022
"Elk Grove, California" 7.5-Minute Topographic Quadrangle
Section 5, Township 6 North, Range 6 East, MDBM
Latitude (NAD83): 38.398864°, Longitude (NAD83): -121.345533°

Figure 1
Site and Vicinity

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING



P:\Elk Grove Milestone II - 24097\Maps\MXDs\MXDs_ARD\Figure_2_NRCS_Milestone2_ARD_v1.mxd (5/7/2025 - jswagel)

N

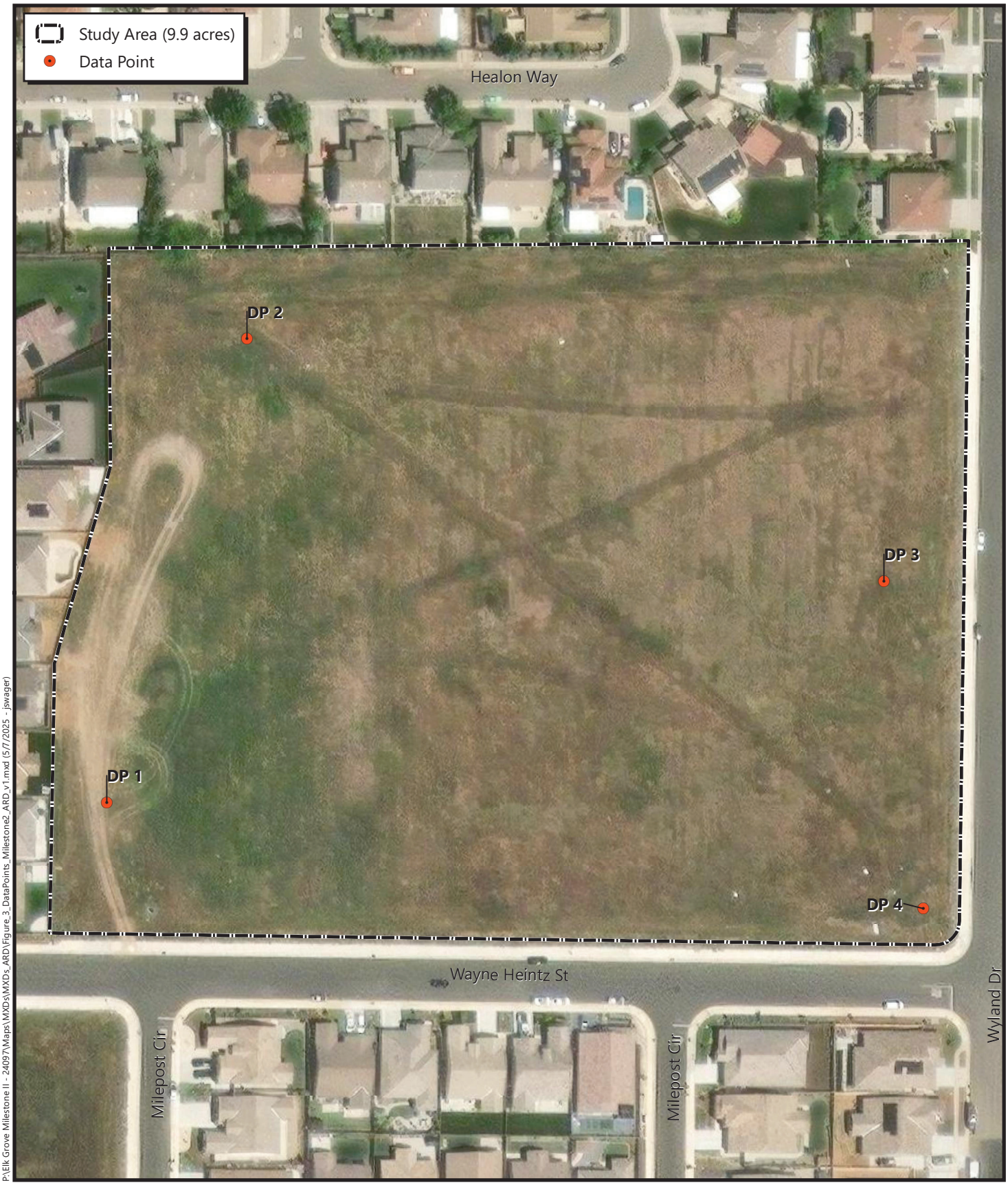
Feet
0 50 100

Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for Sacramento County, California*
Aerial Source: Maxar, 26 April 2022

Figure 2
Natural Resources Conservation Service Soils

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING



P:\Elk Grove Milestone II - 24097\Maps\MXDs\MXDs_ARD\Figure_3_DataPoints_Milestone2_ARD_v1.mxd (5/7/2025 - jswager)

N

Feet
0 50 100

Figure 3
Wetland Determination Data Point Locations

Milestone II
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Aerial Source: Maxar, 26 April 2022

Attachments

Attachment A. Nationwide Permit Authorization for Crooked Creek Estates East

Attachment B. Arid West Wetland Determination Data Forms

Attachment A

Nationwide Permit Authorization
for Crooked Creek Estates East

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

June 21, 2017

Regulatory Division (SPK-2016-00460)

Pacific Housing, Inc.
Attn: Mr. Mark Wiese
2115 J Street, Suite 201
Sacramento, California 95816

Dear Mr. Wiese:

We are responding to your February 13, 2017, pre-construction notification for a Department of the Army Nationwide permit for the Crooked Creek East project. The approximately 48.9-acre project site is located on Waterman Road, Latitude 38.39848°, Longitude -121.34758°, Elk Grove, Sacramento County, California.

Based on the information you provided to this office, the Crooked Creek East project involves the discharge of fill material into 0.252 acre of waters of the U.S. for the construction of a residential development, subject to Section 404 of the Clean Water Act. The specific activities that require DA authorization are the fill of the aquatic resources. These activities will result in the permanent effects to 0.252 acre of seasonal wetland, irrigation ditch and intermittent drainage, including the permanent loss of 0.252 acre of seasonal wetland, irrigation ditch and intermittent drainage. The activities will result in 0.026 acre of indirect impact to a seasonal wetland. The proposed activities would be conducted in accordance with the *Waters of the U.S. Impacts and Avoidance plans* dated June 21, 2014.

We have determined activities in waters of the U.S. associated with the project are authorized by Nationwide Permit Number (NWP) 29. However, this authorization is denied without prejudice until water quality certification under Section 401 of the Clean Water Act has been issued or waived for the activities requiring a permit from this office. Once you receive water quality certification or waiver thereof, the activities are authorized and the work may proceed subject to the conditions of water quality certification, and the terms and conditions of the NWP.

You must comply with all terms and conditions of the NWP and applicable regional conditions. Information about the NWP terms and conditions and Sacramento District regional conditions for California, excluding the Lake Tahoe Basin are available on our website at *www.spk.usace.army.mil/Missions/Regulatory/Permitting/NationwidePermits.aspx*. In addition, your work must comply with the following special condition:

1. To mitigate for the loss of 0.252 acre of waters of the United States and indirect impacts to 0.026 acre of waters of the United States, you shall purchase 0.265 credits of Flood Mosaic Wetland Creation habitat at Cosumnes Floodplain Mitigation Bank. Evidence of this purchase shall be provided to this office prior to initiation of construction activities within waters of the U.S.

Within 30 days after completion of the authorized work, you must sign the enclosed Compliance Certification and return it to this office with the information required by Sacramento District Regional Condition C(9) for California/Nevada/Utah.

This verification is valid until March 18, 2022, when the existing NWPs are scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date the NWP is modified, reissued, or revoked, you will have 12 months from the date of the modification, reissuance or revocation to complete the activity under the present terms and conditions. Failure to comply with the general and regional conditions of this NWP, or the project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization.

We would appreciate your feedback on this permit action including your interaction with our staff and processes. For more information about our program or to complete our Regulatory Program national customer service survey, visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx.*

Please refer to identification number SPK-2016-00460 in any correspondence concerning this project. If you have any questions, please contact Ms. Jessica Neal at 1325 J Street, Sacramento, CA 95816, by email at *Jessica.L.Neal@usace.army.mil,* or telephone at 916-557-6883.

Sincerely,

Peck Ha
Senior Project Manager
CA Delta Section

cc:
Ms. Daria Snider, Madrone Ecological Consulting, dsnider@MadroneEco.com



Waters of the U. S. Impact/Avoidance			
Waters Type	**Impact**	**Avoided**	**Total**
Seasonal Wetlands	0.161	0.026	0.187
Intermittent Channel	0.000	0.133	0.133
Irrigation Ditches	0.091	0.000	0.091
Total	**0.252**	**0.159**	**0.411**

N

Feet
0 200 400

Landuse Source: MacKay & Somps
Aerial Source: *USDA, National Agriculture Imagery Program*, 21 June 2014

Figure 2
Waters of the U.S. Impacts and Avoidance

Crooked Creek
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Attachment B

Arid West Wetland Determination Data Forms

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Milestone II | City/County: Elk Grove | Sampling Date: 4/11/2025
Applicant/Owner: Taylor Morrison | State: CA | Sampling Point: DP 1
Investigator(s): Daria Snider | Section, Township, Range: Section 5, Township 6 North, Range 6 East
Landform (hillside, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): 0-1
Subregion (LRR): LRR C | Lat: 38.3983983575849 | Long: -121.346752807324 | Datum: NAD 83
Soil Map Unit Name: 213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
This is the deepest/most mesic location in this area. Hydrophytic vegetation is present, and marginal hydrology, but hydric soil indicators are absent.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Hordeum marinum*	30	Yes	FAC
2. *Ranunculus sardous*	20	Yes	FACW
3. *Festuca perennis*	10	No	FAC
4. *Lythrum hyssopifolium*	10	No	OBL
5. *Centromadia fitchii*	10	No	FACU
6. *Veronica peregrina*	0		FAC
7. *Leontodon saxatilis*	0		FACU
8. *Briza minor*	0		FAC
	80 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	80 (A)		210 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: DP 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 4/3	90	7.5YR 4/4	10	C	PL	Loamy/Clayey	Faint redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

The redox concentrations are too faint to represent a hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Milestone II | City/County: Elk Grove | Sampling Date: 4/11/2025
Applicant/Owner: Taylor Morrison | State: CA | Sampling Point: DP 2
Investigator(s): Daria Snider | Section, Township, Range: Section 5, Township 6 North, Range 6 East
Landform (hillside, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): 0-1
Subregion (LRR): LRR C | Lat: 38.3994619413396 | Long: -121.346333707464 | Datum: NAD 83
Soil Map Unit Name: 216 - San Joaquin-Durixeralfs complex, 0 to 1 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
This is another representative mesic location. Hydrophytic vegetation is present, but both wetland hydrology and hydric soil indicators are absent.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Lythrum hyssopifolium*	50	Yes	OBL
2. *Montia fontana*	20	Yes	OBL
3. *Juncus bufonius*	15	No	FACW
4. *Briza minor*	10	No	FAC
5. *Convolvulus arvensis*	10	No	UPL
6. *Hordeum marinum*	10	No	FAC
7. *Epilobium brachycarpum*	0		FAC
8.			
	115 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	15	x 2 =	30
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	115 (A)		210 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Extensive overlap in the herb stratum.

SOIL

Sampling Point: DP 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Milestone II | City/County: Elk Grove | Sampling Date: 4/11/2025
Applicant/Owner: Taylor Morrison | State: CA | Sampling Point: DP 3
Investigator(s): Daria Snider | Section, Township, Range: Section 5, Township 6 North, Range 6 East
Landform (hillside, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): 0-1
Subregion (LRR): LRR C | Lat: 38.3988940241365 | Long: -121.344478690883 | Datum: NAD 83
Soil Map Unit Name: 216 - San Joaquin-Durixeralfs complex, 0 to 1 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
This is a representative mesic location. Hydrophytic vegetation is present, and marginal hydric soils, but wetland hydrology indicators are absent.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Lythrum hyssopifolium*	80	Yes	OBL
2. *Epilobium brachycarpum*	10	No	FAC
3. *Juncus bufonius*	10	No	FACW
4. *Hordeum marinum*	10	No	FAC
5. *Plantago lanceolata*	5	No	FAC
6. *Convolvulus arvensis*	5	No	UPL
7. *Briza minor*	2	No	FAC
8. *Lactuca serriola*	1	No	FACU
	125 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	10	x 2 =	20
FAC species	28	x 3 =	84
FACU species	2	x 4 =	8
UPL species	5	x 5 =	25
Column Totals:	125 (A)		217 (B)

Prevalence Index = B/A = 1.74

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Extensive overlap in herb stratum.

VEGETATION Continued – Use scientific names of plants. Sampling Point: DP 3

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Herb Stratum			
9. *Centromadia fitchii*	1	No	FACU
10. *Veronica peregrina*	1	No	FAC
11. *Erodium botrys*	0		FACU
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	125 =Total Cover		
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH, regardless of height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size.

Woody Vine – All woody vines, regardless of height.

Remarks:

SOIL

Sampling Point: DP 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/3	80	7.5YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations
2-12	10YR 4/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Milestone II | City/County: Elk Grove | Sampling Date: 4/11/2025
Applicant/Owner: Taylor Morrison | State: CA | Sampling Point: DP 4
Investigator(s): Daria Snider | Section, Township, Range: Section 5, Township 6 North, Range 6 East
Landform (hillside, terrace, etc.): Terrace | Local relief (concave, convex, none): Concave | Slope (%): 0-1
Subregion (LRR): LRR C | Lat: 38.3981407745549 | Long: -121.344370807899 | Datum: NAD 83
Soil Map Unit Name: 216 - San Joaquin-Durixeralfs complex, 0 to 1 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
This is a representative mesic location. Hydrophytic vegetation is present, and marginal hydric soils, but wetland hydrology indicators are absent. This is the only location onsite that supports Plagiobothrys stipitatus

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 1)			
1. *Plagiobothrys stipitatus*	50	Yes	OBL
2. *Festuca perennis*	20	Yes	FAC
3. *Hordeum marinum*	10	No	FAC
4. *Lythrum hyssopifolium*	5	No	OBL
5. *Centromadia fitchii*	5	No	FACU
6. *Convolvulus arvensis*	2	No	UPL
7. *Veronica peregrina*	2	No	FAC
8. *Leontodon saxatilis*	1	No	FACU
	96 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	55	x 1 =	55
FACW species	0	x 2 =	0
FAC species	32	x 3 =	96
FACU species	6	x 4 =	24
UPL species	3	x 5 =	15
Column Totals:	96 (A)		190 (B)
Prevalence Index = B/A =	1.98		

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Extensive overlap in herb stratum.

VEGETATION Continued – Use scientific names of plants. Sampling Point: DP 4

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	=Total Cover		
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	=Total Cover		
Herb Stratum			
9. *Geranium dissectum*	1	No	UPL
10. *Juncus bufonius*	0		FACW
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	96 =Total Cover		
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH, regardless of height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size.

Woody Vine – All woody vines, regardless of height.

Remarks:

SOIL

Sampling Point: DP 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/4	90	10YR 3/3	10	C	M	Loamy/Clayey	Faint redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Redox concentrations are too faint to represent a hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

APPENDIX F

GEOTECHNICAL ENGINEERING STUDY

GEOTECHNICAL INVESTIGATION



Milestone II Residential Subdivision
Elk Grove, California

PREPARED FOR:

TAYLOR MORRISON, INC.
81 BLUE RAVINE ROAD, SUITE 220
FOLSOM, CALIFORNIA 95630

PREPARED BY:

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DRIVE, SUITE 800
RANCHO CORDOVA, CALIFORNIA 95742

GEOCON

GEOCON PROJECT NO. S2811-05-01

MAY 2024

Project No. S2811-05-01
May 16, 2024

VIA ELECTRONIC MAIL

Shane Cabral
Land Planning and Development Manager
Taylor Morrison, Inc.
81 Blue Ravine Road, Suite 220
Folsom, California 95630

Subject: GEOTECHNICAL INVESTIGATION
MILESTONE II RESIDENTIAL SUBDIVISION
ELK GROVE, CALIFORNIA

Mr. Cabral:

In accordance with your authorization of our proposal (Geocon Proposal No. SA-24-0777-P-GT, dated April 24, 2024), we performed a geotechnical investigation for the proposed Milestone II residential development located northwest of the intersection of Wyland Drive and Wayne Heintz Street in Elk Grove, California.

The accompanying report presents our findings, conclusions, and recommendations for the project as presently proposed. In our opinion, no adverse geotechnical conditions were encountered that would preclude development at the site provided recommendations of this report are incorporated into the design and construction of the project.

Please contact us if you have any questions regarding this report or if we may be of further service.

Respectfully Submitted,

GEOCON CONSULTANTS, INC.

Victor M. Guardado, PE
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
VICTOR M. GUARDADO
No. 92910
CIVIL
STATE OF CALIFORNIA

Jeremy J. Zorne, PE, GE
Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
JEREMY J. ZORNE
No. 2636
GEOTECHNICAL
STATE OF CALIFORNIA

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GEOTECHNICAL INVESTIGATION

1.0 PURPOSE AND SCOPE

This report presents the results of our geotechnical investigation for the proposed Milestone II residential subdivision located northwest of the intersection of Wyland Drive and Wayne Heintz Street in Elk Grove, California. The approximate site location is depicted on the Vicinity Map, Figure 1.

The purpose of our investigation was to evaluate subsurface soil and geologic conditions at the site and provide conclusions and recommendations relative to the geotechnical aspects of designing and constructing the project as presently proposed.

To prepare this report, we performed the following scope of services:

- Performed a limited geologic/geotechnical literature review to aid in evaluating the geologic conditions present at the site. A list of referenced material is included in Section 9.0 of this report.
- Reviewed available conceptual layouts to select exploratory boring locations.
- Performed a site reconnaissance to review project limits, determine exploration equipment access, and mark out exploratory excavation locations.
- Notified subscribing utility companies via Underground Service Alert (USA) a minimum of two working days (as required by law) prior to performing exploratory borings at the site.
- Drilled seven (7) exploratory borings (B1 through B7) with a truck-mounted CME 75 drill rig equipped with hollow-stem and solid-flight augers to depths ranging from approximately 6½ to 31½ feet.
- Obtained representative disturbed and relatively undisturbed soil samples from the exploratory borings.
- Logged the borings in accordance with the Unified Soil Classification System (USCS).
- Drilled two additional borings within the proposed stormwater bio-retention basin area for the purposes of infiltration testing. We performed two (2) field infiltration tests (IT1 and IT2) using a SoilMoisture Corp Aardvark Permeameter at a depth of approximately 7 feet.
- Upon completion, backfilled the borings with soil cuttings.
- Performed laboratory tests to evaluate pertinent geotechnical parameters.
- Prepared this report to summarize our findings, conclusions, and recommendations with respect to design and construction of the project.

Approximate locations of our borings and infiltration tests are shown on the Site Plan, Figure 2 and Proposed Development Plan, Figure 3. Details of our field exploration program including exploratory boring logs and infiltration test data sheets are presented in Appendix A. Details of our laboratory testing program and test results are summarized in Appendix B.

2.0 SITE AND PROJECT DESCRIPTION

The approximately 10-acre undeveloped site is located northwest of the intersection of Wyland Drive and Wayne Heintz Street in Elk Grove, California. Based on our review of historical imagery of the site on Google Earth, the site was formerly used for agricultural purposes such as row crop production or similar. From August 2018 to at least November 2018, it appears that the site was used as a laydown/construction equipment staging area during construction of the surrounding residential development to the south, east, and west. It appears that the residential development to the north was constructed in 2005. Paved roadways and concrete curb, gutter, and sidewalks extend along the southern and eastern borders of the site. Based on our observations and topographic information on the *Preliminary Grading and Storm Dran Plan* prepared by MacKay and Somps (March 5, 2024), the site is relatively flat and level with ground surface elevations generally ranging from approximately 49 to 51 feet above mean sea level (MSL). At the time of our field investigation (April 2023), we observed a relatively narrow and irregularly shaped soil platform/stockpile that extended along the perimeter of the site. The soil platform/stockpile generally appeared to be approximately 5 to 15 feet wide and approximately 1- to 2-foot-high. Site vegetation consisted of moderate to heavy growth of annual grasses. The current site configuration and approximate location of the soil platform/stockpile is shown on the Site Plan, Figure 2 and Proposed Development Plan, Figure 3.

The proposed residential development will consist of 56 single-family residential lots and a 0.7-acre bio-retention basin with underdrains. We expect that the residences will be one- and two-story, wood-framed structures supported on deepened conventional foundations with concrete slabs-on-grade or post-tensioned (PT) slab foundations. Other planned improvements will include underground utility infrastructure, roadways/street improvements, and landscaping. We anticipate that site grading will include cuts and fills on the order of 3 feet or less. We anticipate that underground utility infrastructure and the bio-retention basin may require deeper excavations. We understand that excavations within the basin area will extend to approximately 7 feet from existing grade elevation (approximately 49 feet MSL) to facilitate the installation of the basin underdrains at the BTM basin elevation (approximately 41.75 feet MSL). The planned finished grade elevation of the bottom of the basin is 44.5 feet MSL which is approximately 5 feet below existing grade elevation (approximately 49 feet MSL). The proposed subdivision layout is shown on the Proposed Development Plan, Figure 3.

3.0 SOIL AND GEOLOGIC CONDITIONS

We identified geologic and soil conditions by observing and sampling exploratory borings and reviewing the referenced geologic literature (Section 9.0). Soil descriptions below include the USCS symbol where applicable.

3.1 Site and Regional Geology

The site is located within the Great Valley Geomorphic Province of California, more commonly referred to as the Sacramento Valley. The Sacramento Valley is a broad depression bounded by the Sierra Nevada range to the east and the Coast Ranges to the west. The Sacramento Valley has been filled with a thick sequence of sediments derived from weathering of adjacent mountain ranges resulting in a stratigraphic section of Cretaceous, Tertiary, and Quaternary deposits.

Published geologic mapping depicts the site vicinity underlain by Pleistocene-age alluvium mapped as Riverbank Formation (map symbol, Qr2), which generally consist of interbedded mixtures of sand, silt, clay, and gravel. The conditions encountered in our borings at the site were consistent with the mapped geology of the area.

3.2 Undocumented Fill

We did not encounter undocumented fill or deleterious material in our borings. However, we observed a soil platform/stockpile along the site perimeter, and it appears the site was previously used to store/stage construction materials and equipment based on historical aerial photography. Platform/stockpiled soils should be evaluated and tested by Geocon prior to use for fill during site grading. Deleterious material should be screened and removed from the site and soil prior to being processed in-place or used as fill. Specific recommendations are provided in this report.

3.3 Alluvium

We encountered alluvium in each of our exploratory borings (B1 through B7) to the maximum depth explored of approximately 31½ feet. The alluvium generally consists of layers of very stiff to hard lean clay with sand (CL), sandy lean clay (CL), sandy silt (ML), sandy silt with clay (ML) and medium dense to very dense clayey sand (SC), silty sand with clay (SM), and silty sand (SM) with zones of relatively clean sand (few to trace fines content). We observed cemented soil in our borings at a depth of approximately 2 to 3 feet and deeper.

Soil conditions described in the previous paragraphs are generalized. The exploratory boring logs included in Appendix A detail soil type, color, moisture, consistency, and USCS classification of the soils encountered at specific locations and elevations.

3.4 Infiltration Conditions

Since there is not a local jurisdictionally-required infiltration test method, we generally followed the test procedure as outlined in the Riverside County *Low Impact Development BMP Design Handbook* (2011), a widely accepted guideline.

We performed field infiltration tests using a SoilMoisture Corp Aardvark Permeameter to evaluate vertical infiltration characteristics within the proposed detention basin area. The infiltration tests (IT1 and IT2) were generally performed as follows:

1. The infiltration tests were performed in solid-flight auger borings drilled within the proposed basin area to approximately 7 feet below existing grade.
2. The permeameter was arranged to allow a constant flow of water from a closed water jug set on a digital scale.
3. The original water weight was recorded and the system opened to maintain a constant head within the test boring.
4. The change in water weight was measured at regular intervals until a stabilized infiltration rate was obtained.
5. Upon test completion, the borings were backfilled with the soil cuttings.

The approximate infiltration test locations are shown on the Site Plan, Figure 2 and Proposed Development Plan, Figure 3. Stabilized infiltration rates and the USCS classification of the soil type encountered at the infiltration test location is summarized in Table 3.2. Infiltration test data sheets are included in Appendix A.

TABLE 3.2
SUMMARY OF INFILTRATION TEST RESULTS

Test ID	Approximate Test Depth (feet)	USCS Classification	Fines Content (%)	Stabilized Infiltration Rate (in/hr)	Factored Infiltration Rate[1] (in/hr)
IT1	7	Clayey Sand (SC)	46.5	0.09	0.03
IT2	7	Clayey Sand (SC)	46.8	0.05	0.02

Soil infiltration rates are strongly influenced by soil type (percentage of fines), density, moisture content, and other factors. A small change in clay/silt content and/or compaction can greatly reduce/increase infiltration rates. Therefore, we applied a reduction factor of 3 to account for site variability and long-term reduction of infiltration capacity based due to clogging, siltation, etc., in the measured infiltration rates. Based on the factored infiltration rates, the soil at the elevations tested have a very slow infiltration rate. This should be considered in the stormwater basin design.

4.0 GROUNDWATER

We did not encounter groundwater in our exploratory borings performed on April, 26 2024, to a maximum depth of approximately 31½ feet.

We reviewed available depth-to-groundwater data on the California Department of Water Resources (DWR) *Sustainable Groundwater Management Act (SGMA) Data Viewer* (https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels). The SGMA Data Viewer website indicates that depth to groundwater at the site is on the order of 70 feet (Spring 2022).

It should be noted that fluctuations in the level of groundwater may occur due to variations in rainfall, temperature, and other factors. Depth to groundwater can also vary significantly due to localized pumping, irrigation practices, and seasonal fluctuations. Therefore, it is possible that groundwater may be higher or lower than the levels observed during our investigation.

5.0 SEISMICITY AND GEOLOGIC HAZARDS

5.1 Regional Active Faults

Based on our research, analyses, and observations, the site is not located on any known "active" earthquake fault trace. In addition, the site is not contained within an Alquist-Priolo Earthquake Fault Zone. Therefore, we consider the potential for ground rupture due to onsite active faulting to be low. In order to determine the distance of known active faults within 30 miles of the site, we used the 2013 Caltrans Fault Database KML overlay file for Google Earth. Principal references used within the 2013 Caltrans Fault Database are Jennings and Bryant Fault Activity Map of California (2010) and Working Group on California Earthquake Predictions (WGCEP), Uniform California Earthquake Rupture Forecast Version 3. Results are summarized in Table 5.1.

TABLE 5.1
REGIONAL ACTIVE FAULTS

Fault Name	Approximate Distance from Site (miles)	Maximum Moment Magnitude, M_W
Great Valley 06 (Midland)	23.6	6.8
Foothills Fault System (Ione Fault)	23.8	6.1

5.2 Historical Earthquakes and Ground Shaking

The Sacramento region has a history of relatively low seismicity in comparison with more active seismic regions such as the San Francisco Bay Area or Southern California. The two most commonly referred to earthquakes that resulted in some reported building damage in Sacramento are the Winters and Vacaville events in 1892. There are no reported occurrences of seismic-related ground failure in the Sacramento region due to earthquakes.

We used the United States Geological Survey (USGS) *Unified Hazard Tool* (https://earthquake.usgs.gov/hazards/interactive/) to determine the deaggregated seismic source parameters including controlling magnitude and fault distance. The USGS estimated modal magnitude is 5.5 and the estimated Peak Ground Acceleration (PGA) for the Maximum Considered Earthquake (MCE) with a 2,475-year return period is 0.33g.

5.3 Liquefaction

Liquefaction is a phenomenon in which loose, saturated, cohesionless soil deposits located beneath the groundwater table lose strength when subjected to intense and prolonged ground shaking. The seismic excitation increases pore water pressure creating a buoyant effect of the loose soil. When liquefaction occurs, building foundations may sink or tilt and differential ground settlement may occur. Other effects may include sand boils (ground loss) and lateral spreading if the liquefiable soil is located adjacent to a steep free face. The areas that have the greatest potential for liquefaction are those in which the water table is less than 50 feet below ground surface and the soils are predominately clean, poorly graded sand deposits of loose to medium-dense relative density.

The site is not located in a currently established State of California Seismic Hazard Zone for liquefaction. Based on the subsurface conditions encountered at the site, including a lack of groundwater in the top 50 feet, liquefaction is not a hazard for the site. Mitigation and specific design measures with respect to liquefaction is not necessary for the project.

5.4 Expansive Soil

Laboratory Plasticity Index and Expansion Index tests on selected near-surface soil samples indicate moderate plasticity and corresponding medium expansion potential. Specific recommendations with respect to expansive soils are provided in this report.

5.5 Soil Corrosion Screening

We performed pH, resistivity, chloride, and sulfate tests on one sample to generally evaluate the corrosion potential of the soil with respect to proposed subsurface structures. These tests were performed in accordance with California Test Method (CTM) Nos. 643, 422, and 417. The results are presented in Table 5.5A and should be considered for design of underground structures.

TABLE 5.5A
SOIL CORROSION PARAMETER TEST RESULTS
(CALIFORNIA TEST METHODS 643, 417, AND 422)

Sample No.	Sample Depth (ft.)	pH	Minimum Resistivity (ohm-cm)	Chloride (ppm)	Sulfate (ppm)
B2 Bulk	0-5	7	2,060	2.3	15.3
B6 Bulk	0-5	7.5	1,500	3.4	15

Soil with a low pH (higher acidity) is considered corrosive as it can react with lime in cement to leach out soluble reaction products and result in a more porous and weaker concrete. Per Caltrans *Corrosion Guidelines* (Caltrans 2021), soil with a pH of 5.5 or lower may be corrosive to concrete or steel in contact with the ground.

Soil resistivity is the measure of the soil's ability to transmit electric current. Corrosion of buried ferrous metal is proportional to the resistivity of the soil. A lower resistivity indicates a higher propensity for transmitting electric currents that can cause corrosion of buried ferrous metal items. In general, the higher the resistivity, the lower the rate for corrosion. Per Caltrans *Corrosion Guidelines* (Caltrans 2021), resistivity serves as an indicator parameter for the possible presence of soluble salts and it is not included as a parameter to define a corrosive area for structures. A minimum resistivity value for soil less than 1,100 ohm-cm may indicate the presence of high quantities of soluble salts and a higher propensity for corrosion. Based on the laboratory minimum resistivity test results and Caltrans criteria, soil at the location tested does not have a higher propensity for corrosion.

Table 5.5B presents a summary of concrete requirements set forth by the California Building Code (CBC) Section 1904 and American Concrete Institute (ACI) 318 for possible chloride exposure. Chlorides can break down the protective oxide layer on steel surfaces resulting in corrosion. Sources of chloride include, but are not limited to, deicing chemicals, salt, brackish water, seawater, or spray from these sources.

TABLE 5.5B
REQUIREMENTS FOR CONCRETE EXPOSED TO CHLORIDE-CONTAINING SOLUTIONS
(AFTER ACI 318 TABLES 19.3.1.1 and 19.3.2.1)

Chloride Severity	Exposure Class	Condition	Maximum Water to Cement Ratio by Weight	Minimum Compressive Strength (psi)
Not Applicable	C0	Concrete dry or protected from moisture	N/A	2,500
Moderate	C1	Concrete exposed to moisture but not to external sources of chlorides	N/A	2,500
Severe	C2	Concrete exposed to moisture and an external source of chlorides	0.40	5,000

The appropriate Chloride Severity/Exposure Class should be determined by the project designer based on the specific conditions at the location of the proposed improvements. Further guidance is provided in ACI 318. Per Caltrans *Corrosion Guidelines*, soil with a chloride concentration of 500 ppm or higher may be corrosive to steel structures or steel reinforcement in concrete. Based on Caltrans criteria, soil at the locations tested is not corrosive with respect to chloride content.

Table 5.5C presents a summary of concrete requirements set forth by CBC Section 1904 and ACI 318 for sulfate exposure. Similar to chlorides, sulfates can break down the protective oxide layer on steel leading to corrosion. Sulfates can also react with lime in cement to soften and crack concrete.

TABLE 5.5C
REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS
(AFTER ACI 318 TABLES 19.3.1.1 and 19.3.2.1)

Sulfate Severity	Exposure Class	Water-Soluble Sulfate (SO_4) Content		Cement Type (ASTM C 150)	Maximum Water to Cement Ratio by Weight[1]	Minimum Compressive Strength (psi)
		Percent By Mass	Parts Per Million (ppm)			
Not Applicable	S0	$SO_4 < 0.10$	$SO_4 < 1,000$	No Type Restriction	N/A	2,500
Moderate	S1	$0.10 \leq SO_4 < 0.20$	$1,000 \leq SO_4 < 2,000$	II	0.50	4,000
Severe	S2	$0.20 \leq SO_4 \leq 2.00$	$2,000 \leq SO_4 \leq 20,000$	V	0.45	4,500
Very Severe	S3	$SO_4 > 2.00$	$SO_4 > 20,000$	V+Pozzolan or Slag	0.45	4,500

Notes:
1. Maximum water to cement ratio limits are different for lightweight concrete, see ACI 318 for details.

Based on the laboratory test results, the Sulfate Severity is classified as "Not Applicable" and the Exposure Class is S0. The concrete mix design(s) should be developed accordingly. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

Geocon does not practice in the field of corrosion engineering and the above information is provided as screening criteria only. If corrosion sensitive improvements are planned, we recommend that further evaluations by a corrosion engineer be performed to incorporate the necessary precautions to avoid premature corrosion on buried metal pipes and metal or concrete structures in direct contact with the soils.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 General

6.1.1 No soil or geologic conditions were encountered during our investigation that would preclude development of the site as planned, provided the recommendations contained in this report are incorporated into the design and construction of the project.

6.1.2 The primary geotechnical constraints identified in our investigation are:

- **Undocumented Fill:** A soil platform/stockpile approximately 1 to 2 feet high was identified during our field investigation (approximate extents shown on Site Plan, Figure 2). The platform/stockpile material should be evaluated and tested by Geocon prior to re-use as fill.
- **Expansive Soil:** The site is blanketed by expansive clay soil. These conditions will require mitigation alternatives with respect to grading/earthwork and foundation design including either deepened conventional foundations or PT slab foundations for the proposed structures. Also, concrete flatwork will require aggregate base (AB) underlayment. Specific recommendations are provided herein.
- **Cemented Soil:** We observed cemented soil in our borings, generally from about 2 feet and deeper. The presence of cemented soil can impact excavation difficulty and has the potential to trap moisture in overlying soils due to poor drainage which can create wet and unstable near-surface soil conditions during earthwork construction.

6.1.3 Conclusions and recommendations provided in this report are based on our review of referenced literature, analysis of data obtained from our field exploration, laboratory testing program, and our understanding of the proposed development at this time.

6.1.4 We should review the project plans as they develop further, provide engineering consultation as needed during final design, and perform geotechnical observation and testing services during construction.

6.2 Seismic Design Criteria

6.2.1 Seismic design of structures should be performed in accordance with the provisions of the 2022 California Building Code (CBC) which is based on the American Society of Civil Engineers (ASCE)/Structural Engineering Institute (SEI) publication: *ASCE/SEI 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE/SEI, 2017). We used the *Structural Engineers Association of California* (SEAOC) and *Office of Statewide Health Planning and Development* (OSHPD) web application *Seismic Design Maps* (https://seismicmaps.org/) to evaluate site-specific seismic design parameters in accordance with ASCE 7-16.

For seismic design purposes, sites are classified as Site Class "A" through "F" as follows:

- Site Class A – Hard Rock;
- Site Class B – Rock;
- Site Class C – Very Dense Soil and Soft Rock;
- Site Class D – Stiff Soil;
- Site Class E – Soft Clay Soil; and
- Site Class F – Soils Requiring Site Response Analysis.

Based on the subsurface conditions at the site and measured penetration resistance in our borings, the Site Classification is Site Class "D – Stiff Soil" per Table 20.3-1 of ASCE/SEI 7-16. For the purposes of evaluating code-based seismic parameters for design, we assumed a seismic Risk Category II (per the CBC) for the project. Results are summarized in Table 6.2.1.

TABLE 6.2.1
ASCE 7-16 (CODE-BASED) SEISMIC DESIGN PARAMETERS
SITE CLASS "D" – STIFF SOIL

Parameter	Value	ASCE 7-16 Reference
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	0.532g	Figure 22-1
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.241g	Figure 22-2
Site Coefficient, F_A	1.374	Table 11.4-1
Site Coefficient, F_V	2.119	Table 11.4-2
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	0.731g	Eq. 11.4-1
Site Class Modified MCE_R Spectral Response Acceleration (1 sec), S_{M1}	0.765g*	Eq. 11.4-2
5% Damped Design Spectral Response Acceleration (short), S_{DS}	0.488g	Eq. 11.4-3
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.51g*	Eq. 11.4-4

* Per Supplement 3 of ASCE7-16 (effective November 5, 2021), a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class "D" sites with 1-second spectral acceleration (S_1) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that the code-based parameter S_{M1} is increased by 50% for all applications of S_{M1}. The values for parameters S_{M1} and S_{D1} presented above have been increased in accordance with Supplement 3 of ASCE 7-16.

6.2.2 Table 6.2.2 presents additional seismic design parameters for projects with Seismic Design Categories of D through F in accordance with ASCE 7-16 for the mapped maximum considered geometric mean (MCE_G).

TABLE 6.2.2
ASCE 7-16 SITE ACCELERATION DESIGN PARAMETERS

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.223g	Figure 22-7
Site Coefficient, F_{PGA}	1.377	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.308g	Section 11.8.3 (Eq. 11.8-1)

6.2.3 Conformance to the criteria presented in Tables 6.2.1 and 6.2.2 for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a maximum level earthquake occurs. The primary goal of seismic design is to protect life and not to avoid structural damage, since such design may be economically prohibitive.

6.3 Soil and Excavation Characteristics

6.3.1 In our opinion, grading and excavations at the site may be accomplished with standard effort using heavy-duty grading/excavation equipment. Increased excavation difficulty should be expected in cemented soils at the site. We do not anticipate project excavations to generate oversized rock material (greater than 6 inches in dimension) or boulders.

6.3.2 Because of the presence of relatively clean sand zones (low fines content) within proposed deep-utility excavation depths, sidewall caving and sloughing could be possible during trench excavations. These conditions may require flattening/sloping back trench sidewalls, or enhanced shoring to maintain a stable trench.

6.3.3 Temporary excavations deeper than 4 feet and entered by workers must meet Cal-OSHA requirements as appropriate. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and to make appropriate recommendations where necessary. It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements.

6.3.4 The excavation support recommendations provided by Cal-OSHA are generally geared toward protecting human life and not necessarily toward preventing damage to nearby structures or surface improvements. The contractor should be responsible for using the proper active shoring systems or sloping to prevent damage to any structure or improvements near underground excavations.

6.3.5 Project excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the surcharging object. Penetrations below this 1:1 projection will require special excavation measures or shoring.

6.3.6 If grading occurs during or after the wet season (typically winter and spring), or in periods of precipitation, in-place and excavated soils will likely be wet. Earthwork contractors should be aware of moisture sensitivity of the near-surface fine-grained soils and potential compaction/workability difficulties. The presence of cemented soil/hardpan tends to exacerbate wet soil conditions as water can become trapped (perched) on the cemented soil.

6.3.7 Earthwork and pad preparation operations in these conditions will likely be difficult with low productivity. Often, a period of at least one month of warm and dry weather is necessary to allow the site to dry sufficiently so that heavy grading equipment can operate effectively. Conversely, during dry summer and fall months, dry clay soils may require additional grading effort (discing, mixing, or other means) to attain proper moisture conditioning.

6.3.8 Based on laboratory testing, in-situ moisture content of site soils ranges from approximately 10% to 25% and is generally higher than optimum moisture content for this material (optimum moisture is approximately 13% to 14%). Due to the fine-grained nature of the soils and measured in-situ moisture contents above optimum, additional drying efforts to attain moisture contents suitable for compaction should be anticipated regardless of the time of year. Mitigation alternatives may include aerating/drying the exposed soils (assuming favorable weather conditions), or chemical treatment (e.g., lime treatment). Unstable excavation bottoms may require overexcavating 12 to 18 inches and placing geotextile fabric/geogrid covered with aggregate, for stabilization. We can provide specific recommendations during construction, based on conditions encountered.

6.4 Materials for Fill

6.4.1 From a geotechnical perspective, excavated soils generated from cut operations at the site are suitable for use as fill in structural areas, provided they do not contain deleterious matter, organic material, or cementations larger than 6 inches in maximum dimension. Onsite soils reused as engineered fill will require proper moisture conditioning and processing. All material used as fill should have an organic content of 3% to 5% percent or less.

6.4.2 In general, import fill material should be primarily granular with a “low” expansion potential (Expansion Index less than 50), a Liquid Limit less than 50, Plasticity Index of 15 or less, be free of organic material and construction debris, not contain rock/cementations larger than 6 inches in greatest dimension, and contain sufficient fines (approximately 12% to 15% or more) to act as a binder to reduce caving potential when excavated.

6.4.3 We understand that excess soil generated from the Souza Dairy project in Elk Grove (approximately 2½ miles southwest of the site) may be transported and stockpiled at the site and may be considered for use as engineered fill. If the grading contractor intends to re-use this soil for the Milestone II project, additional testing and approval will be required by Geocon.

6.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered. Proposed import materials should be sampled, tested, and approved by Geocon prior to its transportation to the site.

6.5 Grading

6.5.1 All earthwork operations should be observed and all fills tested for recommended compaction and moisture content by a representative of Geocon.

6.5.2 References to relative compaction and optimum moisture content in this report are based on the latest American Society for Testing and Materials (ASTM) D1557 Test Procedure. Structural building pad areas should extend a minimum of 5 feet horizontally beyond the outside dimensions of structures, including footings and overhangs carrying structural loads.

6.5.3 Prior to commencing grading, a pre-construction conference with representatives of the client, grading contractor, and Geocon should be held at the site. Site preparation, soil handling and/or the grading plans should be discussed at the pre-construction conference.

6.5.4 We did not observe/encounter surface or subsurface structures during our investigation. However, any existing wells, irrigation piping and facilities, and/or debris should be completely removed from the site. The grading contractor should perform a reasonable search for existing abandoned improvements at the site (typically performed in conjunction with site preparation). Any existing water wells, septic systems, leachfields and associated piping should be completely removed in accordance with local oversight agency requirements. In addition, existing irrigation piping and facilities, if any, should also be completely removed. Existing drainage ditches/swales and similar low-lying areas should be drained and cleared of vegetation, organics, and loose/wet unstable soil to expose firm, undisturbed native soil. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with engineered fill in accordance with the recommendations of this report.

6.6.5 The existing soil platform/stockpile should be completely removed to expose undisturbed native soil. The stockpile material may be reused as general fill provided it meets the requirements of section 6.4 of this report and/or at the discretion of Geocon.

6.5.5 At the time of our investigation, the site was primarily vegetated with a moderate to heavy growth of annual grasses. Grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. We estimate required stripping depths will range from approximately 1 to 2 inches. The actual stripping depth should be determined based on actual site conditions prior to grading. Material generated during stripping is not suitable for use within 5 feet of building pads or within pavement areas but may be placed in landscaped or non-structural areas or exported from the site.

6.5.6 Alternatively, surface vegetation may be mowed such that 1 to 2 inches of stubble remains. After removing mowed vegetation, the ground surface should be thoroughly disced in two perpendicular directions to a depth of at least 12 inches to blend the remaining grass and roots into the surface soil. The resulting soil should be thoroughly mixed such that vegetation segments longer than 1 inch are not visually discernable and the resulting overall organic content is less than 3 to 5 percent by dry unit weight.

6.5.7 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

6.5.8 The upper portion (typically upper 8 to 12 inches) of soil across the site has historically been repeatedly loosened and disturbed as a result of tilling, discing, planting, and irrigation associated with past agricultural practices and/or vegetation control. We anticipate that these areas can be suitably re-compacted in-place provided these soils are thoroughly scarified, uniformly moisture-conditioned, and re-compacted as recommended herein.

6.5.9 Depending on the time of year, near-surface clay soil may contain desiccation cracks and below-optimum moisture content extending deeper than the recommended scarification depth. Should this condition exist, the site should be continuously watered for a sufficient time to close desiccation cracks and raise moisture content to at least 2% above optimum. Given the low-permeability nature of the clay soils at the site, this may require several repeated applications of water to achieve suitable moisture penetration. Our experience in similar soil conditions suggest about one week or more of repeated water applications is necessary.

6.5.10 After site preparation, including stockpile removal, exposed soil should be scarified 12 inches, uniformly moisture-conditioned at or above optimum moisture content and compacted to at least 90% relative compaction. Scarification and recompaction operations should be performed in the presence of a Geocon representative to evaluate performance of the subgrade under compaction equipment loading and to identify any loose or unstable soil conditions that could require additional excavation.

6.5.11 Engineered fill should be compacted in horizontal lifts not exceeding 8 inches (loose thickness) and brought to final subgrade elevations. Each lift should be moisture-conditioned to at least 2% above optimum and compacted to at least 90% relative compaction.

6.5.12 Due to the expansive nature of near-surface soils, finished graded pads and subgrade that is left undeveloped during dry periods may develop desiccation cracks. Desiccation cracking reduces soil unit density and may lead to differential settlement or heaving upon wetting. To reduce the potential for this condition, finished subgrade may require periodic watering to maintain moist soil conditions prior to constructing foundations, slabs-on-grade, and pavements. Constructing improvements over desiccated subgrade soils should be avoided.

6.5.13 The top 12 inches of final vehicular pavement and concrete flatwork subgrade, whether completed at-grade, by excavation, or by filling, should be uniformly moisture-conditioned at or above optimum moisture content, compacted to at least 95% relative compaction (per Section 18 of the *City of Elk Grove Construction Specifications 2022)* and be stable. Final pavement subgrade should be finished to a smooth, unyielding surface. The 95% relative compaction requirement applies to the top 12 inches of pavement area subgrade; however, underlying materials must be sufficiently compacted and stable. We recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base (AB). We note that deeper scarification, moisture-conditioning, and compaction efforts may be required in order to achieve overall stability and compaction.

6.5.14 To reduce moisture variations beneath structures and to discourage utility lines from becoming conduits for subsurface water flow, underground utility trenches extending beneath buildings (e.g., plumbing trenches) should be "plugged" at the building edge with properly compacted clay soils or low-permeability sand-cement slurry. The trench plugs should extend at least 2 feet on either side of the penetration.

6.5.15 Underground utility trenches should be backfilled with properly compacted material. Pipe bedding, shading, and backfill should conform to the requirements of the appropriate utility authority. Soil excavated from trenches should be suitable for use as general backfill above shading provided it does not contain deleterious matter, vegetation, or cementations larger than 6 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches (loose thickness). Per Section 19 of the *City of Elk Grove Construction Specifications 2022,* lifts should be compacted to a minimum of 93% relative compaction at or above optimum moisture content. Compaction should be performed by mechanical means only; jetting of trench backfill is not recommended.

6.6 Foundations

Based on soil conditions at the site and our experience with residential developments with similar soil conditions, we recommend using either post-tensioned (PT) slabs or conventional reinforced slab-on-grade foundations with deepened continuous perimeter footings for the proposed residential structures. PT slabs have been used extensively in similar soil conditions in the area and are designed to withstand pressures exerted by expansive soils. Deepened, conventional reinforced foundation systems have also been used extensively in similar soil conditions in the area; however, the long-term performance of conventional slabs is more dependent on proper grading, moisture conditioning, and maintaining adequate site drainage throughout the life of the project.

Post-Tensioned Slabs

6.6.1 PT slab foundations should be designed by a structural engineer experienced in PT slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or WRI/CRSI *Design of Slab-on-Ground Foundations*, Third Edition, as required in Section 1808.6 of the 2022 CBC. PT foundation design should incorporate the geotechnical parameters presented in Table 6.6.1.

TABLE 6.6.1
POST-TENSIONED SLAB DESIGN PARAMETERS

Design Parameter (PTI 3rd Edition)	Recommended Value
1. Thornthwaite Index	-20
2. Equilibrium Suction	3.9 pF
3. Edge Lift Moisture Variation Distance, e_M	5.1 feet
4. Edge Lift, y_M	1.0 inch
5. Center Lift Moisture Variation Distance, e_M	9.0 feet
6. Center Lift, y_M	0.5 inch
Minimum Slab Thickness	10 inches

6.6.2 Allowable bearing capacity for PT slabs should not exceed 1,500 pounds per square foot (psf) for dead plus live load conditions. This value may be increased by one-third to evaluate all transient loads, including wind or seismic forces. The structural engineer should determine slab thickness and reinforcing based on anticipated use and loading of the slab.

6.6.3 The allowable coefficient of friction to resist sliding is 0.30 for concrete against soil/aggregate and 0.20 for concrete against a vapor retarder membrane. Since PT slab foundations are typically not embedded into the building pad, resistance to sliding from passive soil resistance does not apply. If a uniform-thickness PT mat foundation system is planned (most common in Northern California), the slab should include thickened edges extending below the crushed rock underlayment layer.

6.6.4 Assuming the PT slabs are 10 inches thick (or thicker), the slabs should be underlain by a minimum of 2 inches of ½-inch or ¾-inch crushed rock with no more than 5 percent passing the No. 200 sieve to serve as a capillary break. The crushed rock should be subjected to several passes with a walk-behind vibratory compactor or similar equipment prior to placing a vapor barrier or reinforcement/PT tendons for the slab.

6.6.5 Migration of moisture through concrete slabs or moisture otherwise released from slabs is not a geotechnical issue. However, for the convenience of the owner and design team, we are providing the following general suggestions for consideration by the owner, architect, structural engineer, and contractor. The suggested procedures may reduce the potential for moisture-related floor covering failures on concrete slabs-on-grade, but moisture problems may still occur even if the procedures are followed. If more detailed recommendations are desired, we recommend consulting a specialist in this field.

6.6.6 In areas where floor coverings are planned, a minimum 10-mil-thick vapor retarder meeting ASTM E1745 Class C requirements may be placed directly below the slab provided the water-cement ratio of the concrete is 0.45 or less. To reduce the potential for punctures, a higher quality vapor barrier (15 mil, Class A or B) may be used. The vapor retarder, if used, should extend to the edges of the slab, and should be sealed at all seams and penetrations.

6.6.7 The concrete water/cement ratio should be as low as possible. The water/cement ratio should not exceed 0.45 for concrete placed directly on the vapor retarder. This is critically important to reduce the potential for differential curing and subsequent excessive shrinkage cracking. Midrange plasticizers could be used to facilitate concrete placement and workability.

6.6.8 Proper finishing, curing, and moisture vapor emission testing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

6.6.9 Our experience indicates PT slabs are potentially susceptible to excessive edge lift, regardless of the underlying soil conditions. Placing reinforcing steel at the bottom of the perimeter footings/thickened edges and the interior stiffener beams may reduce this potential. Current PTI design procedures primarily address the potential center lift of slabs but, because of the placement of the reinforcing tendons near the top of the slab, the resulting eccentricity after tensioning reduces the ability of the system to reduce edge lift.

6.6.10 During the construction of the PT foundation system, the concrete should be placed monolithically. Under no circumstances should cold joints be allowed to form.

6.6.11 The use of isolated footings, which are located beyond the perimeter of the building and support structural elements connected to the building (such as covered porches), are not recommended. Where this condition cannot be avoided, the isolated footings should be

embedded at least 18 inches below pad grade and be connected to the building foundation with reinforced concrete grade beams at least 12 inches wide and 12 inches deep. In addition, consideration should be given to connecting/dowling patio slabs to the building foundation to reduce the potential for future separation and/or heave to occur.

6.6.12 Prior to placing the vapor barrier, pad subgrade soil should be moisture-conditioned to at least 2% above optimum moisture content to a depth of at least 12 inches. Geocon should confirm the moisture content of the subgrade soils at least 24 hours prior to placing the moisture retarder.

Conventional Foundations

6.6.13 As an alternative to PT slabs, the new buildings may be supported on deepened, reinforced conventional foundations bearing on engineered fill or undisturbed native soil.

6.6.14 To reduce potential for moisture variations beneath the buildings, foundations should consist of continuous perimeter strip footings with interior spread footings. Perimeter strip footings should be continuous around the entire perimeter of the structure without breaks or discontinuities. Attached garage areas should also have a continuous perimeter strip footing including a trenched grade beam beneath garage door entrances.

6.6.15 Continuous perimeter strip footings should be at least 12 inches wide and interior spread footings should be at least 24 inches square. All footings should be embedded at least 18 inches below pad grade. Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom of the footing.

6.6.16 Continuous footings should be reinforced with at least four No. 5 reinforcement bars, two each placed near the top and bottom of the footing to reduce the effects of expansive clay soils and to allow footings to span isolated soil irregularities. Consideration should be given to using slab tie reinforcing bars between the perimeter foundation and the interior slab. The reinforcement recommended above is for soil characteristics only and is not intended to replace reinforcement required for structural considerations. The project structural engineer should evaluate the need for additional reinforcement.

6.6.17 Foundations may be designed using an allowable bearing capacity of 2,000 psf for dead plus live load conditions with a one-third increase for short-term transient loading such as wind and seismic.

6.6.18 Allowable passive pressure used to resist lateral movement of the footings may be assumed to be equal to a fluid weighing 300 pounds per cubic foot (pcf). The coefficient of friction to resist sliding is 0.30 for concrete against soil. Combined passive resistance and friction may be utilized for design provided that the frictional resistance is reduced by 50%.

6.6.19 Foundations designed in accordance with the recommendations above should experience total post-construction settlement due to building loads of less than one inch and differential settlement of ½ inch or less over a distance of 30 feet. The majority of settlement will be immediate and occur as the building is constructed.

6.6.20 A Geocon representative should observe foundation excavations prior to placing reinforcing steel or concrete to observe that the exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

6.7 Conventional Interior Slabs-on-Grade

6.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on anticipated loading. However, at a minimum, slabs should be at least 4 inches thick and reinforced with No. 4 reinforcing bars placed 18 inches on center, each way. Structural requirements may require additional reinforcement or thicker concrete slabs. Control joints should be provided at periodic intervals in accordance with American Concrete Institute (ACI) or Portland Cement Association (PCA) recommendations, as appropriate.

6.7.2 If the near-surface soils of a building pad become dry prior to constructing the slab-on-grade, the building pad should be re-moistened by soaking or sprinkling such that the upper 12 inches of soil is at least 2% above optimum moisture content at least 24 hours before concrete placement. A Geocon representative should verify moisture conditions prior to slab-on-grade construction. This is critical to reduce the potential for post-construction heave due to expansive clay soil.

6.8 Slab-on-Grade Moisture Protection Considerations

6.8.1 Migration of moisture through concrete slabs or moisture otherwise released from slabs is not a geotechnical issue. However, for the convenience of the owner and design team, we are providing the following general suggestions for consideration by the owner, architect, structural engineer, and contractor. The suggested procedures may reduce the potential for moisture-related floor covering failures on concrete slabs-on-grade, but moisture problems may still occur even if the procedures are followed. If more detailed recommendations are desired, we recommend consulting a specialist in this field.

6.8.2 A minimum 10-mil-thick vapor retarder meeting ASTM E1745 Class C requirements may be placed directly below the slab provided the water-cement ratio of the concrete is 0.45 or less. To reduce the potential for punctures, a higher quality vapor barrier (15 mil, Class A or B) may be used. The vapor retarder, if used, should extend to the edges of the slab, and should be sealed at all seams and penetrations.

6.8.3 A layer of clean ½- or ¾- inch crushed rock, with no more than 5 percent passing the No. 200 sieve, may be placed below the vapor barrier to serve as a capillary break.

6.8.4 The concrete water/cement ratio should be as low as possible. The water/cement ratio should not exceed 0.45 for concrete placed directly on the vapor retarder. This is critically important to reduce the potential for differential curing and subsequent excessive shrinkage cracking. Midrange plasticizers could be used to facilitate concrete placement and workability.

6.8.5 Proper finishing, curing, and moisture vapor emission testing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

6.9 Retaining Walls

6.9.1 Design of retaining walls and buried structures may be based on the lateral earth pressures (equivalent fluid pressure) summarized in Table 6.9.1.

TABLE 6.9.1
RECOMMENDED LATERAL EARTH PRESSURES

Condition	Equivalent Fluid Density
Active	45 pcf
At-Rest	65 pcf
Seismic[1]	Not Applicable

1. Based on research by Lew, et al. 2010, the seismic increment of earth pressure may be neglected if the maximum peak ground acceleration (PGA) at the site is 0.4 g or less. The Site Class Modified MCE_G Peak Ground Acceleration (PGA_M) for this site is 0.33g; therefore, the seismic increment of earth pressure may be neglected.

6.9.2 Unrestrained walls be designed using the active case. Unrestrained walls are those that are allowed to rotate more than 0.001H (where H is the height of the wall). Walls restrained from movement (such as basement walls) should be designed using the at-rest case. The soil pressures above assume that the backfill material within an area bounded by the wall and a 1:1 plane extending upward from the base of the wall will be composed of the existing onsite soils.

6.9.3 Retaining wall foundations with a minimum depth of 18 inches may be designed using the allowable bearing capacity provided in Section 6.6.4 of this report. To resist lateral movement of retaining wall foundations, an allowable passive earth pressure equivalent to a

fluid density of 300 pcf for footings or shear keys poured neat against properly compacted engineered fill soils or undisturbed natural soils. This allowable passive pressure is based on the assumption that a horizontal surface extends at least 5 feet or three times the depth of the footing or shear key, whichever is greater, beyond the face of the retaining wall foundation. If this surface is not protected by floor slabs or pavement, the upper 12 inches of material should not be included in the design for lateral resistance. An allowable friction coefficient of 0.3 may be used for resistance to sliding between soil and concrete. Combined passive resistance and friction may be utilized for design provided that the frictional resistance is reduced by 50%.

6.9.4 Retaining walls greater than 2 feet tall (retained height) should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and should be waterproofed as required by the project architect. Positive drainage for retaining walls should consist of a vertical layer of permeable material positioned between the retaining wall and the soil backfill. The permeable material may be composed of a composite drainage geosynthetic or a natural permeable material such as crushed gravel at least 12 inches thick and capped with at least 12 inches of native soil. A geosynthetic filter fabric should be placed between the gravel and the soil backfill. Provisions for removal of collected water should be provided for either system by installing a perforated drainage pipe along the bottom of the permeable material, which leads to suitable drainage facilities.

6.9.5 The recommendations presented above are generally applicable to the design of rigid concrete or masonry retaining walls with a level backfill and having a maximum retained height of 10 feet. In the event that walls higher than 10 feet or other types of walls are planned, Geocon should be consulted for additional recommendations.

6.10 Concrete Sidewalks and Flatwork

6.10.1 Sidewalk, curb, and gutter within City right-of-way should be designed and constructed in accordance with the Section 27 (Curbs, Gutters, Sidewalks and Drainage Structures) of the City of Elk Grove *Standard Construction Specifications* (2022) as applicable. Per this reference, concrete in curbs, gutters and sidewalks should be 6 inches thick and underlain by 6 inches of Class 2 AB. Prior to placing AB, subgrade soil should be scarified at least 12 inches, uniformly moisture conditioned at or above optimum moisture content and compacted to at least 95% relative compaction (City of Elk Grove *Standard Construction Specifications,* Section 18-2.05A, 2022 edition).

6.10.2 Due to the presence of expansive near-surface soils, concrete driveways and flatwork will likely experience seasonal movement. Therefore, some cracking and/or vertical offset should be anticipated. We are providing the following recommendations to reduce distress to concrete flatwork. Recommendations include moisture conditioning subgrade soils, using

aggregate base (AB) underlayment, providing deepened cut-off curbs (turned-down/thickened edges) adjacent to landscaped areas, and providing adequate construction and control joints. It should be noted that even with implementation of these measures, minor slab movement or cracking could still occur.

- Concrete driveways and flatwork should be at least 4 inches thick and underlain by at least 6 inches of AB compacted to at least 90% relative compaction. Driveways should deepened cut-off curbs (turned-down/thickened edges) at least 12 inches wide that extend to the soil subgrade below the AB.
- The upper 12 inches of subgrade soil in exterior flatwork areas should be uniformly moisture-conditioned at least 2% above optimum and compacted to at least 90% relative compaction prior to placing AB.
- To reduce the potential for cracking, at a minimum, concrete driveways should be reinforced with No. 3 reinforcing bars spaced 18 inches center to center, each way.
- Adequate construction and crack control joints following American Concrete Institute (ACI) or Portland Cement Association (PCA) recommendations should be used to control cracking inherent in concrete construction. Construction joints that abut building foundations should include a felt strip, or approved equivalent, that extends the full depth of the exterior slab. Exterior slabs should be structurally independent of building foundations except at doorways where vertical offset could affect doorway operation. At these locations, exterior slabs should be doweled.
- To reduce the potential for water from landscaped areas migrating under concrete flatwork and into the AB, consideration should be given to using plastic moisture cutoffs or full-depth curbs in areas where flatwork abuts irrigated landscaping. The cutoffs or full-depth curbs extend at least 4 inches or more into the soil subgrade beneath the AB.

6.11 Pavement - Hot Mix Asphalt

6.11.1 We performed Resistance-Value (R-Value) testing on two representative bulk soil samples in accordance with California Test Method (CTM) 301. Our testing resulted in an R-Values of 13 and less than 5 (Appendix B). Based on the R-Value test results, our experience in the area, and to account for subgrade soil variability, we recommend using a design R-Value of 5 for untreated native soil subgrade.

6.11.2 Per the *City of Elk Grove Improvements Standards Section 4-5,* pavements designed on subgrade soil with an R-Value of 30 or less, which is true for this site, must have pavement edge drains installed 12 inches deep on both sides of the streets and located at the back of curb. In addition, geotextile fabric must be placed between subgrade soil and the AB for all streets.

6.11.3 To improve pavement support characteristics and in lieu of placing geotextile and installing edge drains, the subgrade soil may be chemically treated with high calcium quicklime (per City of Elk Grove Improvement Standards). Lime-treatment stabilizes clayey soils and increases pavement support characteristics; therefore, a thinner AB section may be used in

the pavement structural section. Lime-treatment should be performed by a qualified soil stabilization contractor in accordance with Caltrans' *Standard Specifications*, or similar specification. For planning purposes, treating the upper 12 to 18 inches of subgrade with 3% to 5% quicklime (by dry weight) will likely produce an improved pavement section subgrade. We should collect subgrade soil samples after grading and perform additional laboratory testing to determine the percent lime required.

6.11.4 We recommend the following alternative hot mix asphalt (HMA) pavement sections for design based on Caltrans design methods. The Street Types and design Traffic Indexes (TIs) shown in Table 6.11.4 are based on Section 4 of the *City of Elk Grove Improvement Standards (2022)*. The project civil engineer should determine the appropriate Street Type and TI based on anticipated traffic conditions. Table 6.11.3 provides alternative pavement sections for street types and corresponding TIs listed in the City of Elk Grove's *Improvement Standards, Section 4: Streets*.

TABLE 6.11.4
FLEXIBLE PAVEMENT SECTIONS

Street Type (Right-of-Way Width)	Traffic Index	HMA[1] (inches)	AB[2] (inches)	Lime Treated Subgrade[3] (inches)
Minor / Primary Residential (40 feet to 44 feet)	6.0	4	12	---
		4	**6**	**18**
Collector (50 feet)	7.0	4	16	---
		4	**7**	**18**
Minor Arterial (74 feet or greater)	9.0	5½	21	---
		5½	**10**	**18**
Major Arterial (96 feet or greater)	10.0	6½	23	---
		6½	**11**	**18**

Notes:
1. HMA = Hot Mix Asphalt (Type A or B) conforming to Section 39 of Caltrans' latest *Standard Specifications*.
2. AB = Class 2 Aggregate Base conforming to Section 26 of Caltrans' latest *Standard Specifications*.
3. Assumes Lime-Treated Subgrade (4% lime by dry weight), develops a minimum R-value of 40 and/or unconfined compressive strength of 300 psi. Although only 12 inches of LTS is required for structural pavement design, we recommend increasing the LTS section to 18 inches in order to increase the performance of the treated subgrade during construction and prior to paving.

6.11.5 The recommended alternative pavement sections are based on the following assumptions:

1. Untreated pavement subgrade soil has an R-Value of at least 5.
2. Untreated pavement subgrade is scarified, moisture-conditioned and compacted in accordance with the recommendations of this report. Prior to placing AB, prepared subgrade soil should be proof-rolled with a loaded water truck to verify stability.

3. Lime-Treated Subgrade (LTS) develops a minimum R-value of 40 and/or minimum unconfined compressive strength of 300 psi and is stable. Prior to placing AB, should be proof-rolled with a loaded water truck to verify stability. LTS should extend at least 2 feet laterally beyond the edge of pavement.
4. Class 2 AB has a minimum R-Value of 78 and meets the requirements of Section 26 of the Caltrans' latest *Standard Specifications*.
5. Class 2 AB is compacted to 95% or higher relative compaction at or near optimum moisture content. Prior to placing HMA, the AB should be proof-rolled with a loaded water truck to verify stability.
6. HMA should conform to Section 39 of Caltrans' latest *Standard Specifications.*
7. Periodic maintenance of HMA pavements is performed.

6.11.5 To reduce the potential for water from landscaped areas migrating under pavement into the AB, consideration should be given to using full-depth curbs in areas where pavement abuts irrigated landscaping. The full-depth curbs should extend at least 6 inches or more into the soil subgrade beneath the AB. Alternatively, modified drop-inlets that contain weep-holes may be used to encourage accumulated water to drain from beneath the pavement.

6.12 Pavement - Rigid Concrete

6.12.1 If rigid Portland cement concrete (PCC) pavement is used in automobile and light-truck traffic areas, we recommend that the PCC pavement be at least 6 inches thick. PCC pavement should be underlain by at least 8 inches of Class 2 AB meeting the requirements of Section 26 of Caltrans' *Standard Specifications* and compacted to at least 95% relative compaction.

6.12.2 Subgrade soils should be prepared and compacted in accordance with the recommendations of this report. Subgrade should be finished to a smooth, unyielding surface and proof-rolled with a loaded water truck to verify stability.

6.12.3 PCC should have a minimum 28-day compressive strength of 3,500 pounds per square inch (psi). Adequate construction and crack control joints should be used to control cracking inherent in concrete construction. We note that the American Concrete Pavement Association (ACPA) recommends a maximum joint spacing no greater than 24X the slab thickness for PCC pavements directly underlain by granular bases.

6.12.4 Steel reinforcement, if used, should be detailed in accordance with PCA, ACI, or similar guidelines. Alternatively, macro synthetic fibers (Euclid Chemical Tuf-Strand SF or equivalent) mixed into the concrete mix may be considered in lieu of conventional steel reinforcement provided they meet the requirements of ASTM C1116 and ASTM D7508 for Type III Synthetic Fibers. If used, we recommend using 1½- to 2-inch-long fibers and a minimum dosage of 5 pounds per cubic yard of concrete.

6.12.5 Adequate dowels should also be used at joints to facilitate load transfer and reduce vertical offset. In addition, the recommendations in Section 6.11.5 pertaining to deepened curbs, moisture cut-offs, and subsurface drainage apply to concrete pavements, sidewalks and flatwork, as well as asphalt pavements.

6.12.6 In general, we recommend that concrete pavements be detailed, designed, constructed, and maintained in accordance with industry standards such as those provided by the ACI and ACPA.

6.13 Bio-Retention Basin Infiltration Design

6.13.1 The measured soil infiltration rates at test depths of approximately 7 feet ranged from 0.09 inches per hour (in/hr) to approximately 0.05 in/hr. The soils at these depths generally consist of medium dense to dense clayey sand. After applying appropriate reduction factors, the factored infiltration rates range from 0.03 to 0.02 in/hr, which is very slow.

6.13.2 Based on the criteria outlined in the *National Engineering Handbook – Chapter 7 – Hydrologic Soil Groups* (USDA Natural Resources Conservation Service, 2009), the near surface soil at the site may be classified as Hydrologic Soil Group "D" for infiltration device design, if needed.

6.14 Site Drainage and Moisture Protection

6.14.1 Adequate site drainage is critical to reduce the potential for differential soil movement, soil expansion, erosion and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to building foundations. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with the 2022 CBC or other applicable standards. In addition, surface drainage should be directed away from the top of slopes into swales or other controlled drainage devices.

6.14.2 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.

6.14.3 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. We recommend use of area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes. In addition, where landscaping is planned adjacent to the pavement or flatwork, we recommend construction of a cutoff wall (deepened curb) along the edge of the pavement/flatwork that extends at least 4 inches into the soil subgrade below the bottom of the base material.

6.14.4 The soil conditions at the site (low-permeability clays) are not conducive to water infiltration devices such as vegetated swales. However, Low Impact Development (LID) devices can be installed to reduce velocity and the amount of water entering the storm drain system. The LID devices should be properly constructed to prevent water infiltration into the surrounding soil. If water infiltrates the expansive soils, distress may be caused to adjacent pavements, flatwork, or structures. Vegetated swales and basin areas (if used) should be lined with an impermeable liner (e.g. high-density polyethylene, HDPE, with a thickness of about 12 mil or equivalent polyvinyl chloride liner) to reduce infiltration.

6.14.5 We recommend that roof drains be connected to water-tight subdrains that direct the water to the storm drain system. However, we understand that LID and Leadership in Engineering and Environmental Design (LEED) requests disconnecting the roof drains to help obtain certification. The water from the roof drains should be directed away from buildings. Consideration should be given to draining roofs to lined planter boxes or placing liners below the proposed landscape areas to prevent infiltration of the water. Geocon can be contacted for additional recommendations.

6.14.6 We recommend implementing measures to reduce infiltrating irrigation water near buildings, flatwork, or pavements. Such measures may include:

- Selecting drought-tolerant plants that require little or no irrigation, especially within 3 feet of buildings, slabs-on-grade, or pavements.
- Using drip irrigation or low-output sprinklers.
- Using automatic timers for irrigation systems.
- Using appropriately spaced area drains.

The project landscape architect should consider incorporating these measures into the landscaping plans.

6.14.7 Experience has shown that even with these provisions, subsurface seepage may develop in areas where no such water conditions existed prior to site development. This is particularly true where a substantial increase in surface water infiltration has resulted from an increase in landscape irrigation.

7.0 FURTHER GEOTECHNICAL SERVICES

7.1 Plan and Specification Review

7.1.1 Geocon should review the foundation and grading plans prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

7.2 Testing and Observation Services

7.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record (GER) throughout the construction phase and provide construction observation and testing services. Providing these services during construction are important in order to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for other's interpretation of our recommendations or the future performance of the project.

8.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, we should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous materials or environmental contamination was not part of our scope of services.

This report is issued with the understanding that it is the responsibility of the owner or their representative to ensure that the information and recommendations contained herein are brought to the attention of the design team for the project and incorporated into the plans and specifications and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

The recommendations contained in this report are preliminary until verified during construction by representatives of our firm. Changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. Additionally, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated partially or wholly by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices used in the site area at this time. No warranty is provided, express or implied.

9.0 REFERENCES

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20. Wallace Kuhl and Associates, Inc. (WKA), *Geotechnical Engineering Report, Crooked Creek Estates East* (WKA No. 11504.02)*,* June 19, 2017.



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Milestone II Residential Subdivision

Elk Grove,
California

VICINITY MAP

S2811-05-01	May 2024	Figure 1

GEOCON 5/8/2024 USER Brown M PATH C:\Users\Brown M\OneDrive - Geocon, Inc\GIS Graphics Projects\S2811-05-01 Milestone II Residential\01 Report\Maps\Figure 1 Vicinity Map.mxd



Legend

- B7 — Approximate Boring Location
- IT2 — Approximate Infiltration Test Location
- Approximate Soil Platform/Stockpile
- Approximate Site Boundary

N

0 100

Scale in Feet

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SITE PLAN

S2811-05-01	May 2024	Figure 2

GEOCON 5/16/2024 USER Brown,M PATH C:\Users\Brown,M\OneDrive - Geocon, Inc\GIS Graphics\Projects\S2811-05-01_Milestone II Residential\Gis Reports\Maps\Figure 2-Site Plan.mxd



Proposed Development Plan by MacKay & Somps (03/05/2024)

Legend

- B7 — Approximate Boring Location
- IT2 — Approximate Infiltration Test Location
- Approximate Soil Platform/Stockpile
- Approximate Site Boundary

N

0 100

Scale in Feet

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PROPOSED DEVELOPMENT PLAN

S2811-05-01	May 2024	Figure 3

GEOCON S-16-2024 USER: Brown,M PATH: O:\Users\Brown,M\OneDrive - Geocon Inc\GIS_Graphics\Projects\S2811-05-01 Milestone II Residential\GIS Reports\Maps\Figure 3 Proposed Development Plan_Updated.mxd

APPENDIX A

APPENDIX A

FIELD EXPLORATION

We performed our geotechnical field exploration on April 26, 2024. Our field exploration program consisted of performing seven exploratory borings (B1 through B7) and performing two infiltration tests (IT1 and IT2) at the approximate locations depicted on the Site Plan, Figure 2 and Proposed Development Plan, Figure 3.

The exploratory borings were performed using a truck-mounted CME 75 drill rig equipped with 6-inch outside diameter (OD) solid-flight augers and 8-inch OD hollow-stem augers. Soil sampling was performed using an automatic 140-pound hammer with a 30-inch drop. We obtained samples using a 3-inch OD split-spoon (California Modified) sampler. We recorded the number of blows required to drive the sampler the last 12 inches (or portion thereof) of the 18-inch sampling interval on the boring logs. Upon completion, the borings were backfilled with soil cuttings.

We visually examined, classified, and logged the subsurface conditions in the exploratory borings and test pits in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488-90). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which we obtained samples. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics, and other factors. The transition between materials may be abrupt or gradual. Where applicable, we revised the field logs based on subsequent laboratory testing. Logs of exploratory borings are presented herein.

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS (MORE THAN HALF IS COARSER THAN NO. 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE FRACTION IS LARGER THAN NO.4 SIEVE SIZE)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS (MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO.4 SIEVE SIZE)	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS (MORE THAN HALF IS FINER THAN NO. 200 SIEVE)	SILTS AND CLAYS (LIQUID LIMIT 50% OR LESS)		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (LIQUID LIMIT GREATER THAN 50%)		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC CLAYS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
	HIGHLY ORGANIC SOILS		PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

BORING/TRENCH LOG LEGEND

- No Recovery
- Shelby Tube Sample
- Bulk Sample
- SPT Sample
- Modified California Sample
- Groundwater Level (At Completion)
- Groundwater Level (Seepage)

PENETRATION RESISTANCE

SAND AND GRAVEL			SILT AND CLAY			
RELATIVE DENSITY	BLOWS PER FOOT (SPT)*	BLOWS PER FOOT (MOD-CAL)*	CONSISTENCY	BLOWS PER FOOT (SPT)*	BLOWS PER FOOT (MOD-CAL)*	COMPRESSIVE STRENGTH (tsf)
VERY LOOSE	0 - 4	0 - 6	VERY SOFT	0 - 2	0 - 3	0 - 0.25
LOOSE	5 - 10	7 - 16	SOFT	3 - 4	4 - 6	0.25 - 0.50
MEDIUM DENSE	11 - 30	17 - 48	MEDIUM STIFF	5 - 8	7 - 13	0.50 - 1.0
DENSE	31 - 50	49 - 79	STIFF	9 - 15	14 - 24	1.0 - 2.0
VERY DENSE	OVER 50	OVER 79	VERY STIFF	16 - 30	25 - 48	2.0 - 4.0
			HARD	OVER 30	OVER 48	OVER 4.0

*NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE LAST 12 INCHES OF AN 18-INCH DRIVE

MOISTURE DESCRIPTIONS

FIELD TEST	APPROX. DEGREE OF SATURATION, S (%)	DESCRIPTION
NO INDICATION OF MOISTURE; DRY TO THE TOUCH	S<25	DRY
SLIGHT INDICATION OF MOISTURE	25≤S<50	DAMP
INDICATION OF MOISTURE; NO VISIBLE WATER	50≤S<75	MOIST
MINOR VISIBLE FREE WATER	75≤S<100	WET
VISIBLE FREE WATER	100	SATURATED

QUANTITY DESCRIPTIONS

APPROX. ESTIMATED PERCENT	DESCRIPTION
<5%	TRACE
5 - 10%	FEW
11 - 25%	LITTLE
26 - 50%	SOME
>50%	MOSTLY

GRAVEL/COBBLE/BOULDER DESCRIPTIONS

CRITERIA	DESCRIPTION
PASS THROUGH A 3-INCH SIEVE AND BE RETAINED ON A NO. 4 SIEVE (#4 TO 3")	GRAVEL
PASS A 12-INCH SQUARE OPENING AND BE RETAINED ON A 3-INCH SIEVE (3"-12")	COBBLE
WILL NOT PASS A 12-INCH SQUARE OPENING (>12")	BOULDER

LABORATORY TEST KEY

CP – COMPACTION CURVE (ASTM D1557)
CR – CORROSION ANALYSIS (CTM 422, 643, 417)
DS – DIRECT SHEAR (ASTM D3080)
EI – EXPANSION INDEX (ASTM D4829)
GSA – GRAIN SIZE ANALYSIS (ASTM D422)
MC – MOISTURE CONTENT (ASTM D2216)
PI – PLASTICITY INDEX (ASTM D4318)
R – R-VALUE (CTM 301)
SE – SAND EQUIVALENT (CTM 217)
TXCU – CONSOLIDATED UNDRAINED TRIAXIAL (ASTM D4767)
TXUU – UNCONSOLIDATED UNDRAINED TRIAXIAL (ASTM D2850)
UC – UNCONFINED COMPRESSIVE STRENGTH (ASTM D2166)

BEDDING SPACING DESCRIPTIONS

THICKNESS/SPACING	DESCRIPTOR
GREATER THAN 10 FEET	MASSIVE
3 TO 10 FEET	VERY THICKLY BEDDED
1 TO 3 FEET	THICKLY BEDDED
3 ⅝-INCH TO 1 FOOT	MODERATELY BEDDED
1 ⅛-INCH TO 3 ⅝-INCH	THINLY BEDDED
⅜-INCH TO 1 ⅛-INCH	VERY THINLY BEDDED
LESS THAN ⅜-INCH	LAMINATED

STRUCTURE DESCRIPTIONS

CRITERIA	DESCRIPTION
ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS AT LEAST ¼-INCH THICK	STRATIFIED
ALTERNATING LAYERS OF VARYING MATERIAL OR COLOR WITH LAYERS LESS THAN ¼-INCH THICK	LAMINATED
BREAKS ALONG DEFINITE PLANES OF FRACTURE WITH LITTLE RESISTANCE TO FRACTURING	FISSURED
FRACTURE PLANES APPEAR POLISHED OR GLOSSY, SOMETIMES STRIATED	SLICKENSIDED
COHESIVE SOIL THAT CAN BE BROKEN DOWN INTO SMALLER ANGULAR LUMPS WHICH RESIST FURTHER BREAKDOWN	BLOCKY
INCLUSION OF SMALL POCKETS OF DIFFERENT SOIL, SUCH AS SMALL LENSES OF SAND SCATTERED THROUGH A MASS OF CLAY	LENSED
SAME COLOR AND MATERIAL THROUGHOUT	HOMOGENOUS

CEMENTATION/INDURATION DESCRIPTIONS

FIELD TEST	DESCRIPTION
CRUMBLES OR BREAKS WITH HANDLING OR LITTLE FINGER PRESSURE	WEAKLY CEMENTED/INDURATED
CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE	MODERATELY CEMENTED/INDURATED
WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE	STRONGLY CEMENTED/INDURATED

IGNEOUS/METAMORPHIC ROCK STRENGTH DESCRIPTIONS

FIELD TEST	DESCRIPTION
MATERIAL CRUMBLES WITH BARE HAND	WEAK
MATERIAL CRUMBLES UNDER BLOWS FROM GEOLOGY HAMMER	MODERATELY WEAK
¼-INCH INDENTATIONS WITH SHARP END FROM GEOLOGY HAMMER	MODERATELY STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **ONE** BLOW FROM GEOLOGY HAMMER	STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **COUPLE** BLOWS FROM GEOLOGY HAMMER	VERY STRONG
HAND-HELD SPECIMEN CAN BE BROKEN WITH **MANY** BLOWS FROM GEOLOGY HAMMER	EXTREMELY STRONG

IGNEOUS/METAMORPHIC ROCK WEATHERING DESCRIPTIONS

DEGREE OF DECOMPOSITION	FIELD RECOGNITION	ENGINEERING PROPERTIES
SOIL	DISCOLORED, CHANGED TO SOIL, FABRIC DESTROYED	EASY TO DIG
COMPLETELY WEATHERED	DISCOLORED, CHANGED TO SOIL, FABRIC MAINLY PRESERVED	EXCAVATED BY HAND OR RIPPING (Saprolite)
HIGHLY WEATHERED	DISCOLORED, HIGHLY FRACTURED, FABRIC ALTERED AROUND FRACTURES	EXCAVATED BY HAND OR RIPPING, WITH SLIGHT DIFFICULTY
MODERATELY WEATHERED	DISCOLORED, FRACTURES, INTACT ROCK-NOTICEABLY WEAKER THAN FRESH ROCK	EXCAVATED WITH DIFFICULTY WITHOUT EXPLOSIVES
SLIGHTLY WEATHERED	MAY BE DISCOLORED, SOME FRACTURES, INTACT ROCK-NOT NOTICEABLY WEAKER THAN FRESH ROCK	REQUIRES EXPLOSIVES FOR EXCAVATION, WITH PERMEABLE JOINTS AND FRACTURES
FRESH	NO DISCOLORATION, OR LOSS OF STRENGTH	REQUIRES EXPLOSIVES

IGNEOUS/METAMORPHIC ROCK JOINT/FRACTURE DESCRIPTIONS

FIELD TEST	DESCRIPTION
NO OBSERVED FRACTURES	UNFRACTURED/UNJOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 1 TO 3 FOOT INTERVALS	SLIGHTLY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 4-INCH TO 1 FOOT INTERVALS	MODERATELY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT 1-INCH TO 4-INCH INTERVALS WITH SCATTERED FRAGMENTED INTERVALS	INTENSELY FRACTURED/JOINTED
MAJORITY OF JOINTS/FRACTURES SPACED AT LESS THAN 1-INCH INTERVALS; MOSTLY RECOVERED AS CHIPS AND FRAGMENTS	VERY INTENSELY FRACTURED/JOINTED

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KEY TO LOGS | Figure A1

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B1

ELEV. (MSL.) ~50' DATE COMPLETED 4/26/2024

ENG./GEO. LAH DRILLER V&W Drilling

EQUIPMENT Truck-mounted CME 75 HAMMER TYPE Automatic | 140lb

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B1-Bulk			CL	**ALLUVIUM** Very stiff, dark brown, moist, Lean CLAY with Sand PP=3.0 tsf				
1									
2	B1-1.5 B1-2					33	111.7	17.9	
3	B1-3			ML	Hard, brown, moist, Sandy SILT with Clay, fine sand, moderately cemented, with calcification, hardpan	50/6"			
4	B1-3.5								
5					brown with black mottling, strongly cemented, increasing Clay content				
6	B1-5.5 B1-6					80/10"	118.9	13.1	
7	B1-7			CL	Hard, brown with black mottling, moist, Sandy Lean CLAY	50/6"			PP>4.5 tsf
8	B1-7.5								
9									
10	B1-10				brown with iron oxide staining, increasing Sand content				
11	B1-10.5					50/6"			PP>4.5 tsf
12									
13									
14									
15	B1-15			ML	Hard, grayish brown with iron oxide staining, moist, Sandy SILT, moderately cemented	50/6"			PP>4.5 tsf
16	B1-15.5								
17									
18									
19				CL	Hard, brown to gray, moist, Sandy Lean CLAY with Silt				
20	B1-20								
21	B1-20.5					50/6"			PP>4.5 tsf
					BORING TERMINATED AT 21 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A2, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B2

ELEV. (MSL.) ~50' DATE COMPLETED 4/26/2024

ENG./GEO. LAH DRILLER V&W Drilling

EQUIPMENT Truck-mounted CME 75 HAMMER TYPE Automatic | 140lb

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B2-BULK			CL	**ALLUVIUM** Very stiff, dark brown, moist, Lean CLAY with Sand PP=2.0 tsf				
1	B2-1								
2	B2-2				hard, strongly cemented, hardpan	50/3"			PP>4.5 tsf
3					increased Sand content				
4	B2-3.5 B2-4					60			PP>4.5 tsf
5					very stiff				
6	B2-5.5 B2-6			SC	Dense, brown, moist, Clayey fine to medium SAND	32			PP=2.75 tsf
7									
8	B2-7.5 B2-8			CL	Hard, grayish brown with black mottling, moist, Sandy Lean CLAY	47			PP=4.5 tsf
9									
10					grayish brown with iron oxide staining, with significant calcification				
11	B2-10.5 B2-11					82			PP>4.5 tsf
					BORING TERMINATED AT 11.5 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A3, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B3

ELEV. (MSL.) **~50'** DATE COMPLETED **4/26/2024**

ENG./GEO. **LAH** DRILLER **V&W Drilling**

EQUIPMENT **Truck-mounted CME 75** HAMMER TYPE **Automatic | 140lb**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B3-Bulk			CL	**ALLUVIUM** Very stiff, dark brown, moist, Lean CLAY with Sand PP=2.5 tsf				
1									
2	B3-1.5 B3-2					11			
3					hard, increased Sand content, moderately cemented, hardpan				
4	B3-3.5 B3-4					76			PP>4.5 tsf
5					brown with iron oxide staining				
6	B3-5.5 B3-6					41			PP>4.5 tsf
					BORING TERMINATED AT 6.5 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A4, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B4

ELEV. (MSL.) ~50' DATE COMPLETED 4/26/2024

ENG./GEO. LAH DRILLER V&W Drilling

EQUIPMENT Truck-mounted CME 75 HAMMER TYPE Automatic | 140lb

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B4-BULK			CL	**ALLUVIUM** Stiff, dark brown, moist, Lean CLAY with Sand PP=1.0 tsf				
1									
2	B4-1.5 B4-2					11	105.1	21.7	
3	B4-3			ML	Hard, brown, moist, Sandy SILT with Clay, fine sand, hardpan				
4	B4-3.5					50/6"	106.1	18.1	
5				CL	Hard, brown, moist, Sandy Lean CLAY				
6	B4-5.5 B4-6					42	96.6	24.8	PP>4.5 tsf
7					brown with black mottling, moderately cemented, with calcification				
8	B4-7.5 B4-8					80/9"	112.1	14.2	PP>4.5 tsf
9									
10	B4-10				with trace fine Gravel, strongly cemented				
11	B4-10.5					50/6"			PP>4.5 tsf
12									
13									
14									
15				SM	Very dense, brown, moist, Silty fine to coarse SAND with Clay, weakly cemented				
16	B4-15.5 B4-16					55	102.3	9.5	
17									
18									
19					difficult drilling conditions				
20					dense, fine to very coarse Sand, increased Clay content				
21	B4-20.5 B4-21					41			
22									
23									
24				ML	Hard, grayish brown with iron oxide staining, moist, Sandy SILT, weakly cemented				

Figure A5, Log of Boring, page 1 of 2

GEOCON

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B4

ELEV. (MSL.) **~50'** DATE COMPLETED **4/26/2024**

ENG./GEO. **LAH** DRILLER **V&W Drilling**

EQUIPMENT **Truck-mounted CME 75** HAMMER TYPE **Automatic | 140lb**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
25									
26	B4-25.5 B4-26					75			PP>4.5 tsf
27									
28									
29									
30									PP>4.5 tsf
31	B4-30.5 B4-31				3 inch lens of Silty very fine to fine SAND	74/8"			
					BORING TERMINATED AT 31 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A6, Log of Boring, page 2 of 2

GEOCON

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

▩ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B5

ELEV. (MSL.) **~50'** DATE COMPLETED **4/26/2024**

ENG./GEO. **LAH** DRILLER **V&W Drilling**

EQUIPMENT **Truck-mounted CME 75** HAMMER TYPE **Automatic | 140lb**

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B5-BULK			CL	**ALLUVIUM** Stiff, dark brown, moist, Lean CLAY with Sand PP=1.5 tsf				
1									
2	B5-1.5 B5-2					9	104.5	22.6	
3	B5-3				hard, brown, increased Sand content, strongly cemented, hardpan				
4	B5-3.5					50/5"	108.8	16.0	
5					moderately cemented				
6	B5-5.5 B5-6					53	114.6	11.6	
					BORING TERMINATED AT 6.5 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A7, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B6

ELEV. (MSL.) ~50' DATE COMPLETED 4/26/2024

ENG./GEO. LAH DRILLER V&W Drilling

EQUIPMENT Truck-mounted CME 75 HAMMER TYPE Automatic | 140lb

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B6-Bulk			CL	**ALLUVIUM** Very stiff, dark brown, moist, Lean CLAY with Sand PP=2.0 tsf				
1									
2	B6-1.5 B6-2					10	102.0	22.8	
3					hard, brown, increased Sand content, moderately cemented, hardpan				
4	B6-3.5 B6-4					73	111.9	18.9	PP>4.5 tsf
5					brown with black mottling, with Silt				
6	B6-5.5 B6-6					51			PP>4.5 tsf
7									
8	B6-7.5 B6-8			ML	Hard, brown to reddish brown, moist, Sandy SILT with Clay, fine sand, moderately cemented	75	102.9	19.3	
9									
10	B6-10			CL	Hard, brown with black mottling, moist, Sandy Lean CLAY, moderately cemented	50/6"			PP=4.5 tsf
11	B6-10.5								

BORING TERMINATED AT 11 FEET
GROUNDWATER NOT ENCOUNTERED
BACKFILLED WITH SOIL CUTTINGS

Figure A8, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◹ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S2811-05-01** PROJECT NAME **Milestone II Residential**

BORING B7

ELEV. (MSL.) ~50' DATE COMPLETED 4/26/2024

ENG./GEO. LAH DRILLER V&W Drilling

EQUIPMENT Truck-mounted CME 75 HAMMER TYPE Automatic | 140lb

DEPTH IN FEET	SAMPLE INTERVAL & RECOVERY	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)	ADDITIONAL TESTS
0	B7-Bulk			CL	**ALLUVIUM** Dark brown, moist, Lean CLAY with Sand				
1	B7-1								
2	B7-1.5				hard, increased Sand content, hardpan	50/6"	100.6	19.6	PP>4.5 tsf
3	B7-3				brown with black mottling, strongly cemented				
4	B7-3.5					50/6"	114.7	16.6	PP>4.5 tsf
5					brown to grayish brown with iron oxide staining, with Silt				
6	B7-5.5 B7-6					26			PP>4.5 tsf
7				SM	Medium dense, dark brown, moist, Silty fine to medium SAND				
8	B7-7.5 B7-8					18	108.6	15.9	
9									
10					brown to grayish brown, fine to very coarse Sand				
11	B7-10.5 B7-11					26			
12									
13									
14									
15					grayish brown, decreased fines content				
16	B7-15.5 B7-16					25	81.1	6.5	
17									
18									
19				ML	Hard, grayish brown, moist, Sandy SILT, weakly cemented				
20									
21	B7-20.5 B7-21					64			PP>4.5 tsf
					BORING TERMINATED AT 21.5 FEET GROUNDWATER NOT ENCOUNTERED BACKFILLED WITH SOIL CUTTINGS				

Figure A9, Log of Boring, page 1 of 1

IN PROGRESS S2811-05-01 MILESTONE II RESIDENTIAL.GPJ 05/16/24

GEOCON

SAMPLE SYMBOLS
- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

Aardvark Permeameter Data Analysis

Project Name:	Milestone II Residential	Date:	4/26/2024
Project Number:	S2811-05-01	By:	LAH
Borehole Location:	IT1	Ref. EL:	49.00
USCS Soil Class:	SC	Bottom EL:	41.30

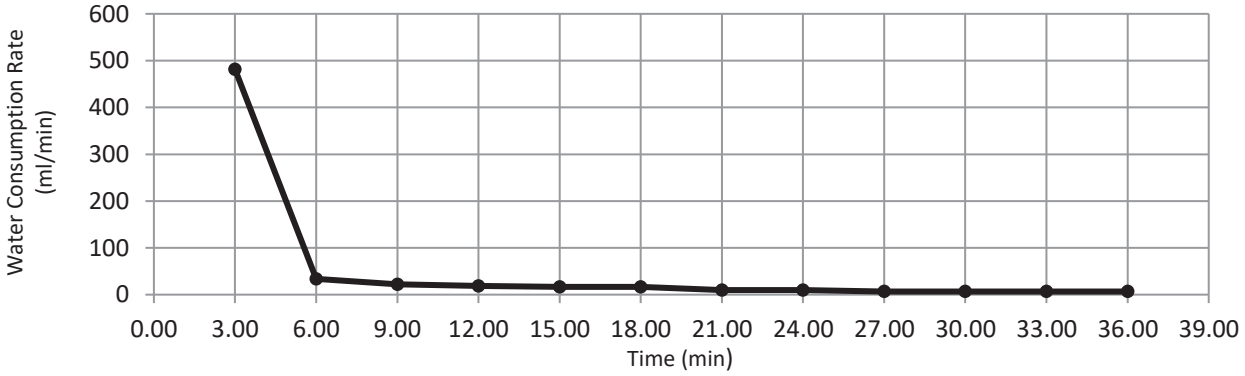
Borehole Diameter (2r):	6.00	in	=	15.24	cm
Borehole Depth (H):	7.70	ft	=	234.70	cm
Dist. Btwn Reservoir & Top of Borehole:	2.00	ft	=	60.96	cm
Depth to Water Table (s):	50.00	ft	=	1524.00	cm
Height APM Raised from Bottom:	2.00	in	=	5.08	cm

Distance Btwn Reservoir and APM (D):	277.241	cm
Head Height (h):	14.91	cm
Distance Btwn Constant Head and Water Table (L):	1304.22	cm

Reading	Time (min)	Time Elapsed (min)	Resevoir Water Weight (g)	Interval Water Consumption (g)	Total Water Consumption (g)	*Water Consumption Rate (ml/min)
1	0.00		10302			
2	3.00	3.00	8858	1444	1444	481.33
3	6.00	3.00	8756	102	1546	34.00
4	9.00	3.00	8690	66	1612	22.00
5	12.00	3.00	8634	56	1668	18.67
6	15.00	3.00	8584	50	1718	16.67
7	18.00	3.00	8534	50	1768	16.67
8	21.00	3.00	8504	30	1798	10.00
9	24.00	3.00	8474	30	1828	10.00
10	27.00	3.00	8454	20	1848	6.67
11	30.00	3.00	8434	20	1868	6.67
12	33.00	3.00	8414	20	1888	6.67
13	36.00	3.00	8394	20	1908	6.67

*1 ml = 1 g

Steady Flow Rate (Q): 6.67 ml/min



Field-Saturated Hydraulic Conductivity:

Case 1: L/h > 3	K_{sat} =	0.0039	cm/min	0.09 in/hr

Figure A10

GEOCON

Aardvark Permeameter Data Analysis

Project Name:	Milestone II Residential	Date:	4/26/2024
Project Number:	S2811-05-01	By:	LAH
Borehole Location:	IT2	Ref. EL:	49.00
USCS Soil Class:	SC	Bottom EL:	41.67

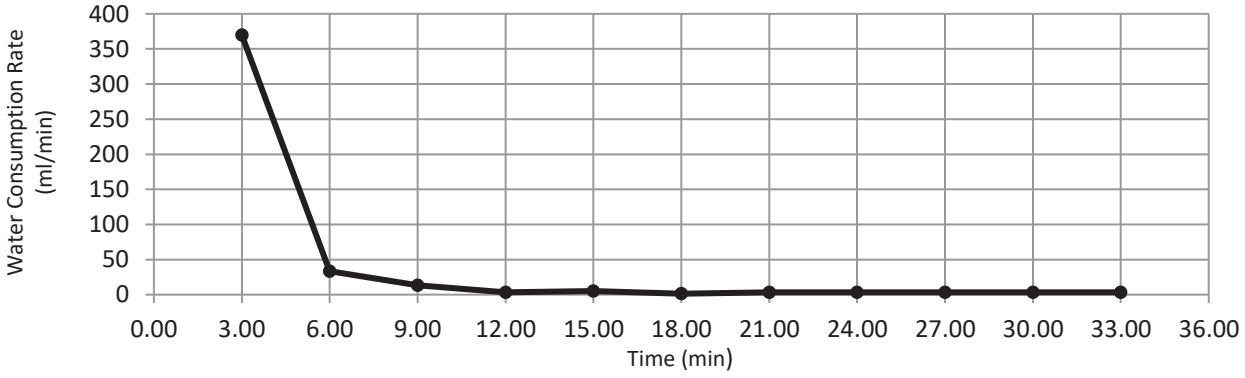
Borehole Diameter (2r):	6.00	in	=	15.24	cm
Borehole Depth (H):	7.33	ft	=	223.42	cm
Dist. Btwn Reservoir & Top of Borehole:	1.96	ft	=	59.74	cm
Depth to Water Table (s):	50.00	ft	=	1524.00	cm
Height APM Raised from Bottom:	2.00	in	=	5.08	cm

Distance Btwn Reservoir and APM (D):	264.7442	cm
Head Height (h):	14.87	cm
Distance Btwn Constant Head and Water Table (L):	1315.46	cm

Reading	Time (min)	Time Elapsed (min)	Resevoir Water Weight (g)	Interval Water Consumption (g)	Total Water Consumption (g)	*Water Consumption Rate (ml/min)
1	0.00		8196			
2	3.00	3.00	7086	1110	1110	370.00
3	6.00	3.00	6986	100	1210	33.33
4	9.00	3.00	6946	40	1250	13.33
5	12.00	3.00	6936	10	1260	3.33
6	15.00	3.00	6920	16	1276	5.33
7	18.00	3.00	6916	4	1280	1.33
8	21.00	3.00	6906	10	1290	3.33
9	24.00	3.00	6896	10	1300	3.33
10	27.00	3.00	6886	10	1310	3.33
11	30.00	3.00	6876	10	1320	3.33
12	33.00	3.00	6866	10	1330	3.33

*1 ml = 1 g

Steady Flow Rate (Q): 3.33 ml/min



Field-Saturated Hydraulic Conductivity:

Case 1: L/h > 3

K_{sat} = 0.0019 cm/min 0.05 in/hr

Figure A11

APPENDIX B

APPENDIX B

LABORATORY TESTING PROGRAM

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. Selected soil samples were tested for their in-place dry density and moisture content, plasticity characteristics, grain size distribution, corrosion potential, expansion potential, pavement support characteristics, and moisture-density relationship. The results of the laboratory tests are presented below and on the following pages.

TABLE B1
EXPANSION INDEX TEST RESULTS
ASTM D4829

Sample Number	Depth (feet)	Moisture Content (%)		Expansion Index	Classification*
		Before Test	After Test		
B2 Bulk	0-5	11.6	26.1	62	Medium
B4 Bulk	0-5	12.3	27.1	73	Medium
B6 Bulk	0-5	12.2	28.3	71	Medium

**Expansion Potential Classification per ASTM D4829.*

TABLE B2
R-VALUE TEST RESULTS
ASTM D2844

Sample Number	Depth (feet)	Average Dry Density (pcf)	Average Moisture Content (%)	R-Value
B2 Bulk	0-5	114.2	17.5	13
B3 Bulk	0-5	105.4	20.5	<5

Sample ID	Depth (feet)	Liquid Limit	Plastic Limit	Plasticity Index	Expansion Index	%<#200 Sieve	Water Content (%)	Dry Density (pcf)
B1-2	2						17.9	111.7
B1-6	6					59.4	13.1	118.9
B2-Bulk	0-5	39	19	20	62	71.7		
B4-Bulk	0-5	35	18	17	73	74.4		
B4-2	2						21.7	105.1
B4-3.5	3.5					53.1	18.1	106.1
B4-6	6						24.8	96.6
B4-8	8						14.2	112.1
B4-16	16					18.9	9.5	102.3
B5-2	2						22.6	104.5
B5-3.5	3.5						16.0	108.8
B5-6	6						11.6	114.6
B6-Bulk	0-5	43	21	22	71	79.9		
B6-2	2						22.8	102.0
B6-4	4						18.9	111.9
B6-8	8					76.4	19.3	102.9
B7-1.5	1.5						19.6	100.6
B7-3.5	3.5						16.6	114.7
B7-8	8					38.1	15.9	108.6
B7-16	16					7.1	6.5	81.1
IT1-7	7	25	17	8		46.5		
IT2-7	7	26	18	8		46.8		

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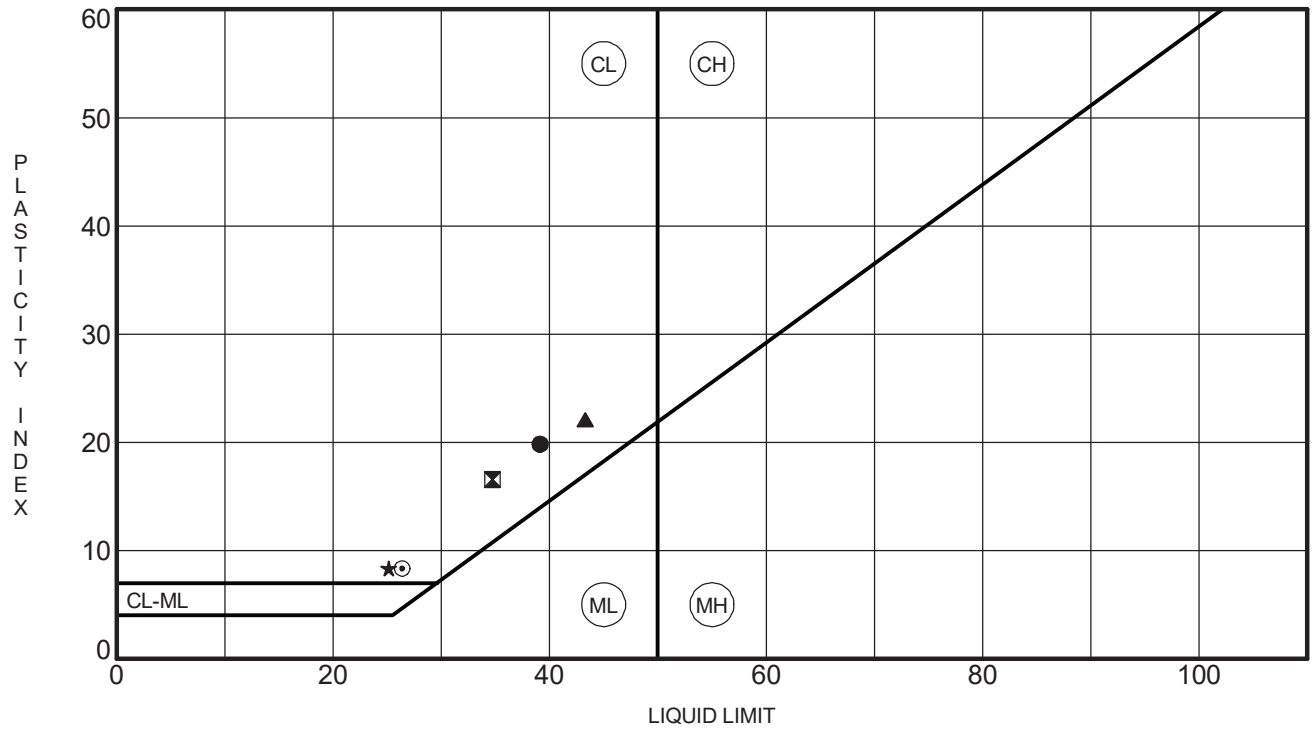
Rancho Cordova, CA 95742
Telephone: 916-852-9118

Summary of Laboratory Results

Project: Milestone II Residential
Location: Elk Grove, California
Number: S2811-05-01
Figure: B1

US LAB SUMMARY GEOTECH 2 WITH EI COLUMN S2811-05-01 MILESTONE II RESIDENTIAL.GPJ US_LAB.GDT 5/16/24



	Sample No.	Liquid Limit	Plastic Limit	Plasticity Index	% Pass #200 Sieve	Unified Soil Classification Description	Preparation Method
●	**B2-Bulk**	**39**	**19**	**20**	**71.7**	**LEAN CLAY with SAND(CL)**	**dry**
⊠	**B4-Bulk**	**35**	**18**	**17**	**74.4**	**LEAN CLAY with SAND(CL)**	**dry**
▲	**B6-Bulk**	**43**	**21**	**22**	**79.9**	**LEAN CLAY with SAND(CL)**	**dry**
★	**IT1-7**	**25**	**17**	**8**	**46.5**	**CLAYEY SAND(SC)**	**dry**
⊙	**IT2-7**	**26**	**18**	**8**	**46.8**	**CLAYEY SAND(SC)**	**dry**

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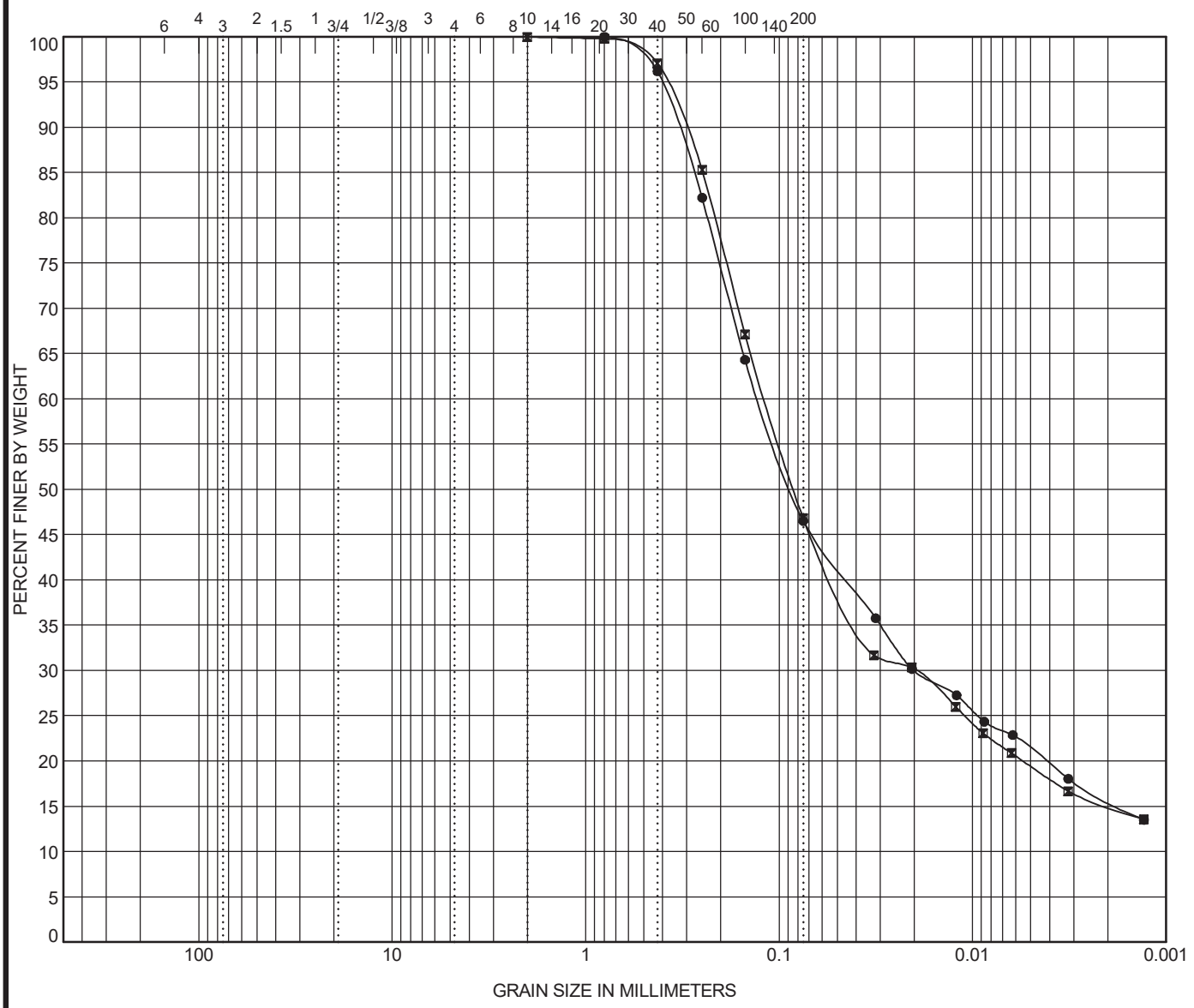
ATTERBERG LIMITS (ASTM D4318)

Project: Milestone II Residential
Location: Elk Grove, California
Number: S2811-05-01
Figure: B2

PI COPY 2 S2811-05-01 MILESTONE II RESIDENTIAL.GPJ US_LAB.GDT 5/16/24



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Sample No.	Classification	LL	PL	PI	Cc	Cu
●	**IT1-7**	**CLAYEY SAND(SC)**	**25**	**17**	**8**		
⊠	**IT2-7**	**CLAYEY SAND(SC)**	**26**	**18**	**8**		

	Sample No.	D100	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**IT1-7**	**0.8**	**0.086**	**0.02**		**0.0**	**53.5**	**30.8**	**15.7**
⊠	**IT2-7**	**2**	**0.084**	**0.02**		**0.0**	**53.2**	**31.8**	**15.1**

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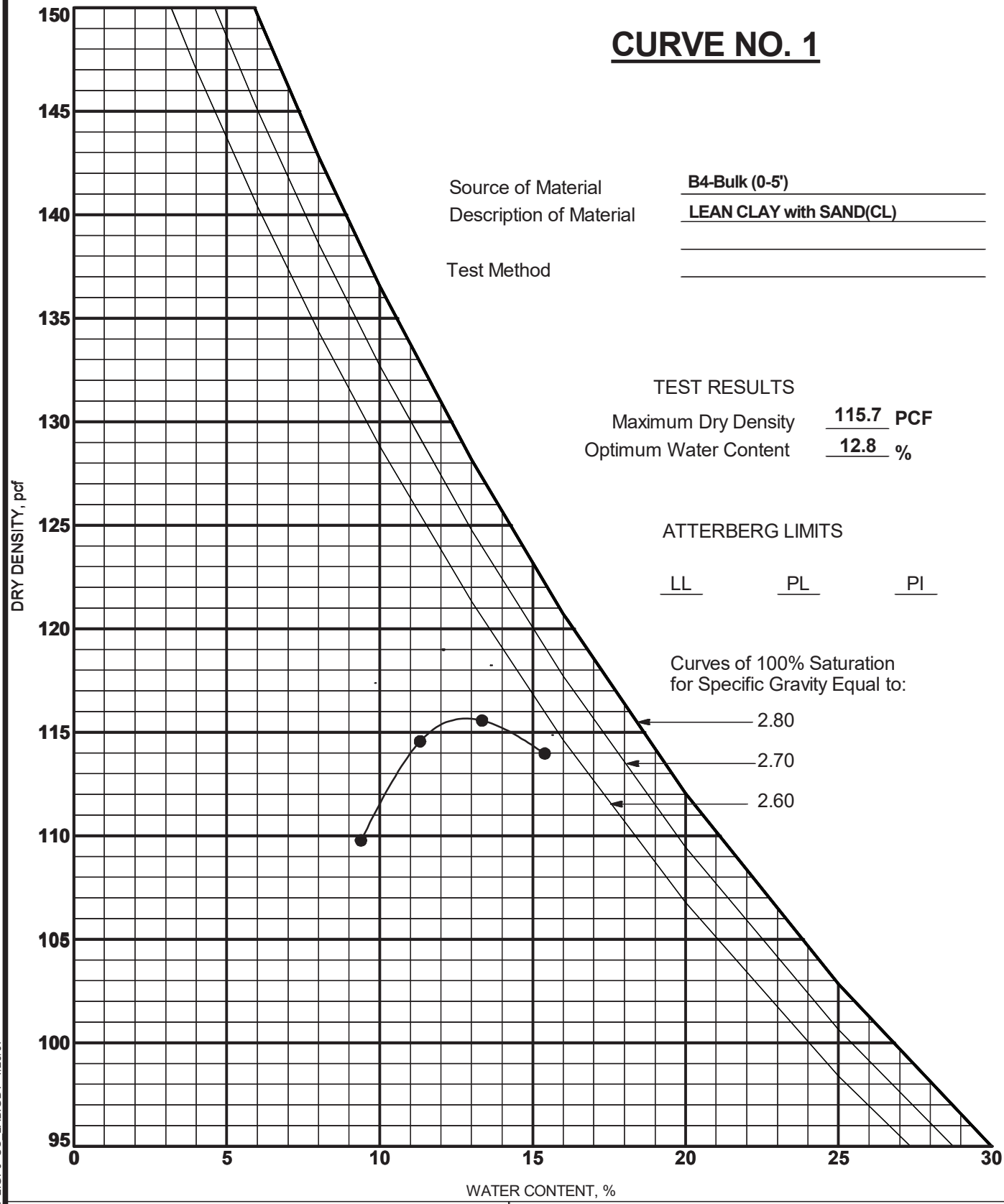
GRAIN SIZE DISTRIBUTION (ASTM D422, D6913)

Project: Milestone II Residential
Location: Elk Grove, California
Number: S2811-05-01
Figure: B3

GRAIN SIZE COPY 2 S2811-05-01 MILESTONE II RESIDENTIAL.GPJ US LAB.GDT 5/16/24

CURVE NO. 1



Source of Material: B4-Bulk (0-5')

Description of Material: LEAN CLAY with SAND(CL)

Test Method:

TEST RESULTS

Maximum Dry Density: 115.7 PCF

Optimum Water Content: 12.8 %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

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MOISTURE-DENSITY RELATIONSHIP

Project: Milestone II Residential

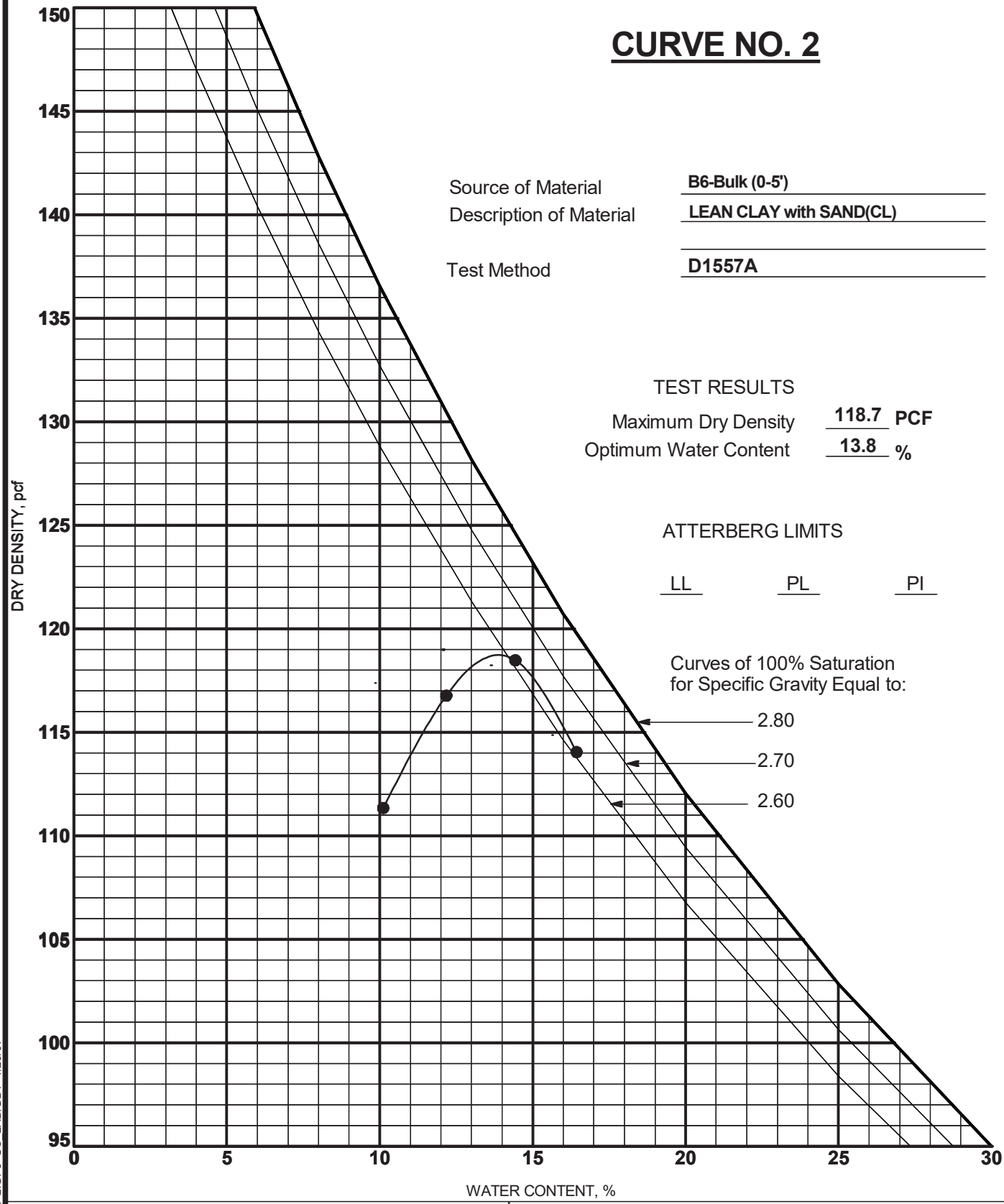
Location: Elk Grove, California

Number: S2811-05-01

Figure: B4

US COMPACTION COPY 2.GPJ US_LAB.GDT 1/26/07

CURVE NO. 2



Source of Material: B6-Bulk (0-5')

Description of Material: LEAN CLAY with SAND(CL)

Test Method: D1557A

TEST RESULTS

Maximum Dry Density: 118.7 PCF

Optimum Water Content: 13.8 %

ATTERBERG LIMITS

LL PL PI

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MOISTURE-DENSITY RELATIONSHIP

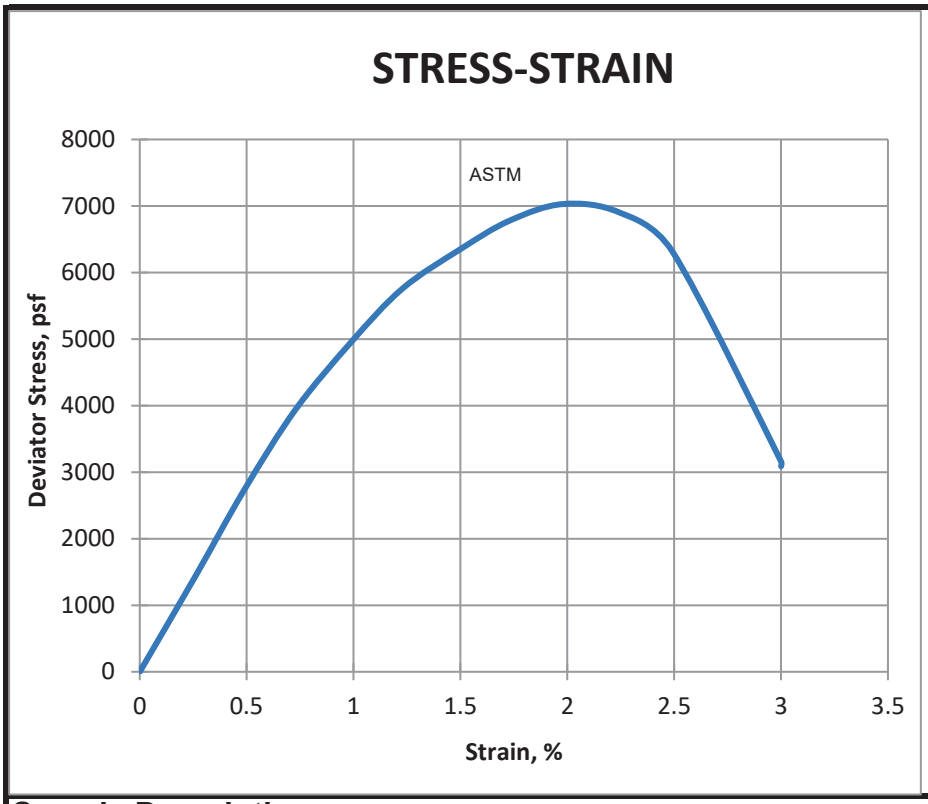
Project: Milestone II Residential

Location: Elk Grove, California

Number: S2811-05-01

Figure: B5

US COMPACTION COPY 2.GPJ US_LAB.GDT 1/26/07



Failure Photo



Sample Description	
Sample ID	B4-6
Sample Depth (feet)	6
Material Description	Yellowish Brown lean CLAY
Initial Conditions at Start of Test	
Height (inch) average of 3	4.82
Diameter (inch) average of 3	2.40
Moisture Content (%)	24.8
Dry Density (pcf)	96.6
Estimated Specific Gravity	2.7
Saturation (%)	90.1
Shear Test Conditions	
Strain Rate (%/min)	0.9173
Major Principal Stress at Failure (psf)	7030
Strain at Failure (%)	2.0
Test Results	
Unconfined Compressive Strength (tons/ft^2)	3.5
Unconfined Compressive Strength (lbs/ft^2)	7030
Unconfined Compressive Strength (psi)	49
Shear Strength (tons/ft^2)	1.8
Shear Strength (lbs/ft^2)	3515

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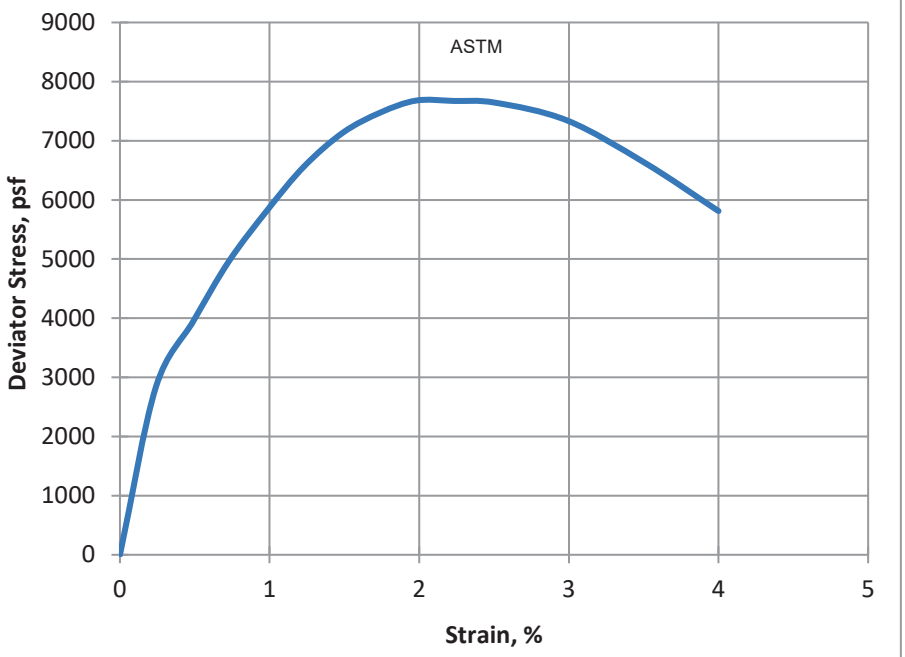
Unconfined Compressive Strength (ASTM D2166)

Project: Milestone II Residential
Location: Elk Grove, California
Number: S2811-05-01
Figure: B6



Failure Photo



Sample Description	
Sample ID	B7-4
Sample Depth (feet)	4
Material Description	Yellowish Brown lean CLAY
Initial Conditions at Start of Test	
Height (inch) average of 3	4.82
Diameter (inch) average of 3	2.40
Moisture Content (%)	16.6
Dry Density (pcf)	114.7
Estimated Specific Gravity	2.7
Saturation (%)	95.6
Shear Test Conditions	
Strain Rate (%/min)	0.9941
Major Principal Stress at Failure (psf)	7680
Strain at Failure (%)	2.0
Test Results	
Unconfined Compressive Strength (tons/ft^2)	3.8
Unconfined Compressive Strength (lbs/ft^2)	7680
Unconfined Compressive Strength (psi)	53
Shear Strength (tons/ft^2)	1.9
Shear Strength (lbs/ft^2)	3840

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Unconfined Compressive Strength (ASTM D2166)

Project: Milestone II Residential
Location: Elk Grove, California
Number: S2811-05-01
Figure: B7

APPENDIX G

CLIMATE ACTION PLAN CONSISTENCY REVIEW CHECKLIST

CITY OF ELK GROVE
CLIMATE ACTION PLAN CONSISTENCY REVIEW CHECKLIST

INTRODUCTION AND PURPOSE

The Elk Grove Climate Action Plan (CAP) outlines the actions the City will undertake to achieve its proportional share of the State's greenhouse gas (GHG) emissions reductions. As part of CAP implementation, the CAP Consistency Checklist (Checklist) has been developed to ensure that new development and large additions or alterations to existing development in the City appropriately incorporates all applicable GHG reduction measures from the CAP into the design and implementation of new development on a project-by-project basis. Implementation of these measures will ensure that new development is consistent with the CAP's assumption for relevant CAP strategies toward achieving the City's identified GHG reduction targets.

The Checklist, in conjunction with the CAP, provides a streamlined review process for proposed new development projects that are subject to discretionary review that triggers environmental review pursuant to the California Environmental Quality Act (CEQA). Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to cumulative GHG emissions may be determined to be less than significant if it complies with the applicable measures in a "plan for the reduction of GHG emissions" (e.g., CAP). Under these provisions, if a project can show consistency with applicable GHG reduction measures, the level of analysis for the project required under CEQA with respect to GHG emissions can be reduced considerably (i.e., a detailed analysis of project-level GHG emissions and potential climate change impacts is not needed).

Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist would be required to prepare a separate, more detailed project-level GHG analysis as part of the applicable CEQA document.

Projects that use the Checklist to demonstrate CAP consistency must submit the completed CAP Checklist, signed by the Planning Department, with the Building Department application submittal.

Planning Department Signature:

_____ _____

Signature Date

_____

Name

SECTION A. CHECKLIST SUBMITTAL REQUIREMENTS

If a project is determined to require environmental review pursuant to CEQA, the completed Checklist must be submitted to the City with appropriate supplemental information. This Checklist is designed to assist the applicant and the City in identifying the minimum CAP-related requirements specific to the proposed project. However, the final determination of a project's consistency with the Checklist will be made by City staff. As a result, it may be necessary to supplement the completed Checklist with supporting materials, calculations, or certifications to demonstrate full compliance with the Checklist requirements.

Projects required to complete this Checklist must first provide the following information:

Project Name:	Milestone II GPA, Rezone & VTSM		
Assessor's Parcel No:	134-0110-177		
Property Address/ Location:	Northwest corner of Ryland Drive and Wayne Heintz Street		
General Plan Land Use/Zoning designations for the project site (as stated in the Elk Grove General Plan and Zoning Ordinance. Please contact staff if you are unsure of the correct designations.)			
General Plan Land Use:	Public/Quasi-Public (P/QP)	Zoning:	RD-5
Gross Acres:	10.31		
Project Description: (submit separate attachments if necessary)	The proposed project is a Small Lot Vesting Tentative Subdivision Map to subdivide a ±10.3 ac. lot into 56 residential lot of 55'x95' typical size. The project is also proposing a General Plan Amendment and Rezone to accommodate the SLVTSM. The project is located within the East Elk Grove Specific Plan and is a vacant, pad graded lot.		

Existing Land Use of the Property:	Undeveloped
Identify all applicable proposed land uses:	N/A
☐ Single-Unit Residential (indicate # of units):	56 single family detached units and one LID basin
☐ Multi-Unit Residential (indicate # of units):	N/A
☐ Commercial (total square footage):	N/A
☐ Industrial (total square footage):	N/A
☐ Other (describe):	N/A

SECTION B: GENERAL PLAN LAND USE CONSISTENCY

The first step in determining CAP consistency for a discretionary development project is to assess the project's consistency with the land use assumptions in the City's General Plan and zoning designations, which were used to calculate the future GHG emissions forecasts and targets for the CAP. If the proposed project is consistent with applicable General Plan and zoning designations, the proposed project may be determined to be within the scope of emissions covered under the CAP. If General Plan and zoning designation consistency is demonstrated, the project would still need to demonstrate consistency with all applicable measures in the CAP Checklist.

If the project is not consistent with the existing General Plan and zoning designations, it is still possible that the land use changes required for the project would be small enough to remain consistent with the growth projections used in the CAP. The questions below must be completed, as applicable, to determine whether the project is consistent with the City's General Plan and zoning designations and related GHG emissions forecasts and targets.

1.	Are the proposed land uses in the project consistent with the existing General Plan land use and zoning designations? *If "Yes", questions 2 and 3 below are not applicable and the project shall proceed to Section C of the checklist.* *If "No", proceed to Question 2 below.*	Yes ☐	No ☒
2.	Is a General Plan amendment (including a Community Plan amendment) and/or rezoning required for the project? *If "No", question 3 below is not applicable and the project shall proceed to Section C of the checklist.* *If "Yes", proceed to Question 3 below.*	Yes ☒	No ☐
3.	If the proposed project is not consistent with the General Plan land use or zoning designations, does the project include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations? *If "Yes", attach to this checklist the estimated project emissions under both existing and proposed designation(s) for comparison. Compare the maximum buildout of the existing designation and the maximum buildout of the proposed designation. If the proposed project is determined to result in an equivalent or less GHG-intensive project when compared to the existing designations, proceed to Section C of the checklist.* *If "No", the applicant must conduct a full GHG impact analysis for the project as part of the CEQA process. The project shall incorporate each of the applicable measures identified in Section C to mitigate cumulative GHG emissions impacts.*	Yes ☒	No ☐

SECTION C: CAP MEASURES

The completion of this Checklist will document a project's compliance with the GHG reduction measures in the City's CAP that are applicable to new development. The compliance requirements apply to development projects that include discretionary review, require environmental review, and, therefore, are not exempt under CEQA.

All applicable Checklist questions must be answered "Yes" in order to be consistent with the CAP, and documentation provided that substantiates how compliance would be achieved. For measures for which a "Yes" is indicated, the features must be demonstrated as part of the project's design and described. All applicable requirements in the checklist will be included in the conditions of approval or issuance of building permit stage of project approval.

If any questions are marked with a "No", the project cannot be determined to be consistent with the CAP, and project specific GHG analysis and mitigation would be required.

If any questions are marked "N/A" (meaning "not applicable"), a statement describing why the question is not applicable shall be provided to the satisfaction of the Planning Division or building official.

1. ENERGY EFFICIENCY

Please refer to the California Green Building Standards Code (CALGreen) for more information when completing this section.

Checklist Requirement by Project Type	Corresponding CAP Measure	Yes	No	N/A
a) For **single-unit and/or multi-unit residential additions or alterations** where the building's conditioned area increases in volume or size, would the addition or alteration comply with CALGreen Residential Tier 1 energy efficiency standards?[1]	BE-4	☐	☐	☒
b) For **nonresidential additions or alterations** ≥ $200,000 building permit valuation or ≥ 1,000 square feet, would the project comply with CALGreen nonresidential Tier 1 energy efficiency standards for additions and alterations? [1]	BE-4	☐	☐	☒
c) For the construction of **new single-unit and/or multi-unit residential units**, would the project comply with CALGreen Residential Tier 1 energy efficiency standards? [2]	BE-4	☒	☐	☐
d) For the construction of **new nonresidential projects,** would the project comply with CALGreen nonresidential Tier 1 energy efficiency standards?	BE-4	☐	☐	☒

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

The Project is a new residential subdivision. As a result, the questions related to other types of projects are not applicable.

Footnotes:

1. Refer to Section 301 of CALGreen for specific requirements in the code which apply to additions and alterations.
2. For Energy Budget calculations as part of CALGreen Tier 1 standards, high-rise residential (four stories or higher) and hotel/motel buildings are considered nonresidential buildings.

General Notes:

a. Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project.

2. BUILDING ELECTRIFICATION

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
a) For the construction of **new single-unit and/or multi-unit residential units**, would at least ten percent[1] of units in the project include exclusively electrical appliances and HVAC system including but not limited to: i. A heat pump water heater with a minimum Uniform Energy Factor of 2.87. ii. An induction cooktop/range for all cooking surfaces in the unit.	BE-6	☒	☐	☐

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

_____

_____

_____

_____

Footnotes:

1. If fewer than five units will be built for the project, then no units would be required to be all electrical. If between five and ten units will be built, then a minimum of one unit would be required to be all electrical. For projects larger than ten units, if ten percent of units does not result in a whole number, the number of units shall be round up to the nearest whole number of units.

General Notes:

a) Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project.

b) By answering "Yes" to this question, the applicant is agreeing to the requirements of this checklist question. The inclusion of all electrical appliance consistent with this checklist question will be verified during conditions review stage of project approval.

3. Solar Photovoltaic (PV) System Readiness for Nonresidential and Mixed-Use Projects

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
For new or additions or alterations of existing nonresidential, hotel/motel and mixed-use projects, will the project: a) follow the Performance compliance approach (energy budgets) specified in 2022 California Energy Code Title 24, Part 6, Section 140.1?	BE-7	☐	☐	☒
b) follow the Prescriptive compliance approach specified in 2022 California Energy Code Title 24, Part 6, Section 140.2?	BE-7	☐	☐	☒
c) subscribe to a community shared solar electric generation system, or other renewable electric generation system, and/or community battery storage system, in compliance with Title 24, Part 1, Section 10-115?	BE-7	☐	☐	☒

Please provide the following information as part of the building permit submittal to verify the project meets the requirements of this question. Please check the appropriate box to indicate which option has been chosen:

i. ☐For projects using the Performance approach: Supply a copy of the T-24 calculations per software approved by the CEC established through the Alternative Calculation Method Approval Manual (ACM Manual).

ii. ☐For projects using the Prescriptive approach: Provide documentation to show CEC compliance per sections 140.3 through 140.9 and identify each area of compliance in the construction plans at the first building plan submittal to the building department.

iii. ☐For projects using a community shared solar approach: Provide documentation from SMUD or PG&E showing acceptance into a community shared solar program that complies with SB 43 and the Building Energy Efficiency Standards and serves the area to be constructed.

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

The Project is a new residential subdivision. As a result, the questions related to other types of projects are not applicable.

General Notes:

a) By answering "Yes" to this checklist question, it is understood that the project will be in compliance with Measure BE-7.
b) Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project.

4. Decrease Energy Emissions In New Construction

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
a) For new residential development projects, would the project or a portion of the project request the issuance of building permits on or after January 1, 2025? *If "Yes", proceed to question b of this checklist requirement.*	BE-5	☒	☐	☐
b) For single-unit residential projects, would the project or portions of the project permitted after January 1, 2025 achieve a 15 percent reduction in natural gas compared to the 2022 Title 24 standard[1]?	BE-5	☒	☐	☐
c) For multi-unit residential projects, would the project or portions of the project permitted after January 1, 2025 achieve a 34 percent reduction in natural gas compared to the 2022 Title 24 standard[1]?	BE-5	☐	☐	☒
d) For all residential projects, would the project or portions of the project permitted after January 1, 2025 include a 50% reduction in electricity emissions from 2019 levels (for example through the use of onsite solar photovoltaics or participation in SMUDs solarshares program)?	BE-5	☒	☐	☐

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

The Project is a new residential subdivision. As a result, the questions related to other types of projects are not applicable.

Footnotes:

1. Reductions in natural gas could be achieved through installation of additional electric appliances (both space and water heating, electric or induction stoves, etc.) or through an increase in the percentage of all-electric homes.
2.

General Notes:

a) Verification that the requirements of this checklist question are being met will be conducted during the conditions of approval for the project.

5. VEHICLE MILES TRAVELED (VMT) THRESHOLD

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
a) For development projects required to conduct a Traffic Analysis in accordance with the City's Transportation Analysis Guidelines, would the project: i. achieve a 15 percent reduction in VMT below the City's 2015 baseline; or ii. include sufficient VMT reduction measures to achieve a 15 percent reduction in VMT below the City's 2015 baseline?	TACM-6	☒	☐	☐

b) Please provide sufficient information as part of the Checklist submittal to verify the project meets the requirements for this question. Information provided shall be consistent with the methodology included in the City's Transportation Analysis Guidelines and demonstrate that, at full build out, the project would generate VMT equal to or less than the limit of the project's General Plan land use designation. The VMT limits for each General Plan land use designation are shown in Table 6-1 of the City's General Plan. Demonstrating compliance with this checklist question can be achieved by referring to the project's traffic analysis within the CEQA document or a discussion of the project's VMT generation as part of the traffic analysis conducted for the project.

c) Please check the appropriate box to indicate what information is being included as part of the Checklist submittal:

i. ☒ Provide the portion of the project's CEQA document which demonstrates that the project would generate VMT equal to or less than the limit of the project's General Plan land use designation.

ii. ☐ Provide the portion of the traffic analysis conducted for the project which demonstrates that the project would generate VMT equal to or less than the limit of the project's General Plan land use designation. Additional calculations must be provided to demonstrate the project's consistency with this measure, if this information is not explicitly stated in the traffic analysis.

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

_____

_____

_____

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General Notes:

a) Verification that the requirements of this checklist question are being met will be conducted during discretionary project review and during the conditions of approval for the project.

6. Electric Vehicle Supply Equipment (EVSE)

Design and installation of Electric Vehicle Supply Equipment (EVSE) as part of this measure will be conducted consistent with all applicable standards established in CALGreen Section 4.106.4.1 for one- and two-unit dwellings and townhouses, CALGreen Section 4.106.4.2 and 4.106.4.3 for multi-unit dwellings and hotels/motels and CALGreen Section 5.106.5 for nonresidential buildings.

Checklist Requirement by Project Type	Corresponding CAP Measure	Yes	No	N/A
a) For the construction of **residential single units, duplexes and townhouses,** would the parking spaces serving each unit be "EV Capable"[1] consistent with CALGreen Section 4.106.4.1?	TACM-9	☒	☐	☐
b) For the construction of **hotels/motels**, would the parking spaces be "EV Ready"[2] and EVSE[4] installed consistent with CALGreen Section 4.106.4.2.2?	TACM-9	☐	☐	☒
c) For the construction of **multi-unit residential units**, would the parking spaces be "EV Ready"[2] and EVSE installed consistent with CALGreen Section 4.106.4.2.2 and accessibility requirements in CA Building Code, Chapter 11B, Section 11B-228.3?	TACM-9	☐	☐	☒
d) For alterations of **existing multi-unit residential parking facilities**, would the modifications include any of the following: i. new parking facilities added? ii. electrical systems or lighting of existing parking facilities added or altered AND the work requires a building permit?	TACM-9	☐	☐	☒
e) If the answer to **D is Yes**, would at least 10 percent[3] of the total new parking spaces for the project be "EV Capable"[1] consistent with CALGreen Section 4.106.4.3?	TACM-9	☐	☐	☒
f) For **new non-residential projects** not specified above, to facilitate EV charging, would electric vehicle infrastructure be provided consistent with CALGreen Section	TACM-9	☐	☐	☒

5.106.5.3?				
Please specify which EV parking allocation method is being used: ☐ EV space allocation method (consistent with CALGreen Section and Table 5.106.5.3.1) ☐ EV power allocation method (consistent with CALGreen Section and Table 5.106.5.3.6)				
g) For alterations of **existing non-residential buildings or parking facilities**, would the modifications include any of the following: i. the scope of construction work includes an increase in power supply to an electric service panel as part of a parking facility addition or alteration? ii. a new photovoltaic system is installed covering existing parking spaces? iii. additions or alterations of 1,000 sf or greater and/or permit valuation of $200,000 or more and the scope of work includes an increase in power supply to an electric service panel.	TACM-9	☐	☐	☒
h) If the answer to **G is "YES"**, would electric vehicle infrastructure be provided consistent with CALGreen Section 5.106.5.4 and accessibility requirements in CA Building Code, Chapter 11B, Section 11B-228.3?	TACM-9	☐	☐	☒
i) For construction of **warehouses**[4], **grocery and retail stores**[5], **office buildings**[6], **and manufacturing facilities**[7] **with planned off-street loading spaces**, would the project include electrical capacity for future EVSE[8] installation consistent with CALGreen Section 5.106.5.5?	TACM-9	☐	☐	☒
If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable. The Project is a new residential subdivision. As a result, the questions related to other types of projects are not applicable.				

Footnotes:

1. "EV Capable" is defined as a parking space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging. Installation needs to include a 40-ampere 208/240 volt minimum dedicated branch circuit.
2. "EV Ready" is defined as an EV capable space terminating in a receptacle or a charger.
3. The calculation for spaces shall be rounded up to the nearest whole number.
4. Warehouses includes uses defined in the Municipal Code as "Distribution, logistics and delivery centers", and "Storage, warehouse".
5. Retail store includes buildings designed primarily for the display and sale of merchandise, including, but not limited to, uses defined in the Municipal Code as "Alcoholic beverage sales", "Animal sales and/or grooming", "Art, antique, collectable", "Artisan shops", "Auto and vehicle rental", "Auto and vehicle sales", "Building materials stores and yards", "Convenience stores", "Liquor store", "Retail, accessory", "Retail, general", "Retail, superstore", "Retail, superstore, large format", "Retail, warehouse/club", "Smoke shops", and "Thrift store".
6. Office buildings include buildings designed primarily for business, clerical or professional activities, including, but not limited to, uses defined in the Municipal Code as "Business support services", "Call center", "Medical services, general", "Office, accessory", "Office, Building Trade Contractors", and "Office, business and professional".
7. Manufacturing includes uses defined in the Municipal Code as "Manufacturing, major", "Manufacturing, minor", "Manufacturing, small scale", and "Wineries, distilleries, and brewery".
8. For the purpose of this Checklist, electric vehicle supply equipment (EVSE) is defined by Article 625.2 of the California Electrical Code.

General Notes:

a) By answering "Yes" to this checklist question, it is understood that the project will be in compliance with Measure TACM-9.
b) Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project.

7. Tier 4 Construction Equipment

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
a) For the construction of new residential and nonresidential projects, would 25 percent of the off-road construction fleet used during construction include Environmental Protection Agency certified off-road Tier 4 diesel engines?	TACM-8	☒	☐	☐

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

_____

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General Notes:

a) By answering "Yes", the applicant is agreeing to the requirements of this checklist question. During the project's grading permit approval stage, the applicant would be required to provide a list of all pieces of construction equipment that would be used in project construction including equipment manufacturer, equipment model number, type of equipment, and engine model year, and engine tier.

b) Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project.

8. TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

Checklist Requirement	Corresponding CAP Measure	Yes	No	N/A
a) For the construction of nonresidential and mixed-use projects with ≥ 50,000 square feet of nonresidential construction, would the project: i. demonstrate through the requirements of CAP Checklist 5 that the project would achieve a 20 percent reduction in VMT below the City's 2015 baseline or include sufficient VMT reduction measures to achieve a 20 percent reduction in VMT below the City's 2015 baseline; or ii. include an Air Quality Mitigation Plan to achieve a 15 percent reduction in ozone precursor emissions that has been approved by the Sacramento Metropolitan Aire Quality Management District; or iii. include a TDM Plan based on the TDM Plan Guidelines (see Attachment A) that has been reviewed and approved by the City of Elk Grove Public Works Department?	TACM-3	☐	☐	☒

If "N/A" has been checked for this question, please provide a statement explaining why the measure is not applicable.

The Project is a new residential subdivision. As a result, the questions related to other types of projects are not applicable.

General Notes:

a) The City will develop and adopt a "Transportation Demand Management Program" ordinance similar to the requirements in this Checklist question, pursuant to Measure TACM-8 in the CAP. By answering "yes" to this checklist question, it is assumed that the project will be in compliance with Measure TACM-8 by implementing one of the three compliance pathways listed above. However, upon adoption of the City's forthcoming TDM ordinance, this Checklist and TDM Plan Guidelines may need to be modified to reflect the updated compliance mechanisms as defined in the ordinance.

b) Verification that the requirements of this checklist question are being met will be conducted during the issuance of building permits for the project. For projects which choose option (i) for this question, verification that the requirements of this checklist question are being met will be conducted during the development review stage for the project.

APPENDIX H

PHASE I ENVIRONMENTAL SITE ASSESSMENT

WallaceKuhl & ASSOCIATES | A Universal Engineering Sciences Company

Phase I Environmental Site Assessment

MILESTONE II PROPERTY

Wyland Drive

Elk Grove, California

Project No. 4640.2200088.0000

July 8, 2022

Prepared for:

Mr. Ryan Hatheway

Taylor Morrison

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Phase I Environmental Site Assessment

MILESTONE II PROPERTY

Wyland Drive

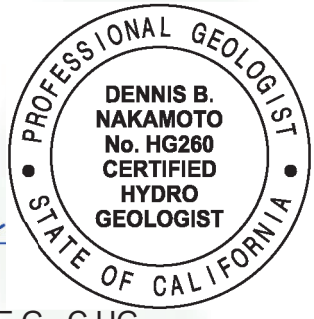
Elk Grove, California

Project No. 4640.2200088.0000

July 8, 2022

Wallace-Kuhl & Associates (WKA), on behalf of Taylor Morrison, prepared this Phase I Environmental Site Assessment for the Milestone II Property located along Wyland Drive in Elk Grove, California, California. We declare that, to the best of our professional knowledge and belief, the report preparer and reviewer meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312 and have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. We have developed and performed the all appropriate inquiries in general conformance with the standards and practices set forth in 40 CFR Part 312 et seq. Resumes of the key staff who prepared this report are included in Appendix A.

WALLACE-KUHL & ASSOCIATES



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*Supporting Documents Appendix contains: Custom Soil Resource Report, EDR® Reports: Sanborn Map Search, Historical Topographic Maps, Aerial Photographic Decade Package, and City Directory Report; FEMA Flood Map, and Environmental Lien Search Report.

EXECUTIVE SUMMARY

The purpose of this Phase I Environmental Site Assessment (ESA) was to assess the Milestone II Property (herein referred to as Site) for evidence of Recognized Environmental Conditions (RECs) resulting from current and/or former Site activities. The Site is located along Wyland Drive in Elk Grove, California (Figures 1, 2, 3, and 4) and is comprised of 10.31 acres of vacant land. The Site is identified by Sacramento County Assessor's Parcel Number (APN): 134-0110-177 (Figure 3). The following presents a list of observations and findings identified during the preparation of this report:

- The historical land use research dating back to the early 1900s revealed that the Site has been used for dry farm crop cultivation or pastureland since at least 1937.
- An inactive well was observed on the northeastern portion of the Site.
- A debris consisting of vegetative material and wood was observed on the northeastern portion of the Site.
- According to an environmental lien search, no environmental liens are associated with the Site.
- Given the documentation reviewed concerning the agency listings for neighboring facilities, none of the facilities reviewed is likely to have a negative impact on the Site.
- Based on the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

WKA has performed this ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-21 for the Milestone II Property. This ESA has revealed no evidence of RECs in connection with the Site.

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to evaluate the Milestone II Property (herein referred to as Site) for evidence of potential Recognized Environmental Conditions (RECs) resulting from current and/or former site activities as defined by the American Society of Testing and Materials (ASTM) Standard E 1527-21 (ASTM, 2021).

According to the ASTM, "this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitations under CERCLA [Comprehensive Environmental Response, Compensation and Liability Act] liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"): that is, the practice that constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B)."

This ESA has been performed in general conformance with the ASTM Standard E 1527-21 and the scope and limitations defined in Wallace-Kuhl & Associates (WKA) proposal, 4640.0622.00014, dated June 14, 2022.

1.2 Scope of Services

WKA has completed this ESA for the Site shown on Figures 1 through 4. Mr. Jay Pawlek with Taylor Morrison authorized WKA to proceed with this assessment on June 22, 2022, through the signed Taylor Morrison Authorizing Addendum #360001000-000421 to Master Agreement for Professional Services.

The scope of this assessment included the following:

- Conduct a site reconnaissance for visual evidence of surface contamination and potential sources of subsurface contamination;
- Conduct a visual inspection of the adjoining properties for evidence of RECs;
- Conduct interviews with the following, as available:
  - Key site manager,

  - Major occupants,
  - Past and present owners, operators,
  - Government and/or agency personnel, and,
  - Inquiries conducted at abandoned sites may include interviews with owners or occupants of neighboring or nearby properties;
- Conduct a records review, which included the following:
  - Physical setting documents to determine regional geology, general soil information, and local and regional groundwater conditions,
  - Historical information, including but not limited to, Sanborn maps, topographic maps, aerial photographs, ownership records, building department records, local street directories, zoning and land use records, and prior assessments, as available,
  - Environmental records, including federal, state, tribal, and county regulatory agency lists that will help identify RECs on the Site and the adjoining properties, and,
  - Based on the outcome of the database search, review of specific regulatory agency files for identified contaminated facilities in order to evaluate whether the listed facilities are hazardous materials threats to the Site;
- Conduct a preliminary screen for vapor encroachment conditions on the Site per ASTM E2600-15;
- Review of the completed *ASTM E 1527-21 User Questionnaire* (*Questionnaire*) regarding Recorded Environmental Liens, activity and use limitations (AULs), relationship of the purchase price to the fair market value of the Site, and any specialized knowledge of the Site;
- Review of environmental liens and Activity and Use Limitations (AULs) reports, as provided; and
- Prepare a final report of the results of the ESA.

The scope of services described above comply with the ASTM Standard E 1527-21, which was published in November 2021 The EPA had indicated it would determine that the ASTM E1527-21 Standard satisfied the All Appropriate Inquires rule on May 13, 2022, unless it received comments to the contrary. EPA was to issue a timely statement in the Federal Register, only if it determined that the E1527-21 was not compliant with the AAI. As of the date this proposal was published, WKA has found no EPA statement in the Federal Register and has concluded that E1527-21 meets the AAI requirements.

1.3 Special Terms and Conditions

No special terms or conditions to the WKA Environmental Site Assessment Consulting Agreement or the WKA scope of services were requested or performed during the preparation of this report. Taylor Morrison authorized WKA to perform a search for recorded environmental liens and Activity and Use Limitations (AULs) for the Site. Discussion regarding the search is included in Section 4.3.3 of this report.

1.4 User Provided Information

WKA provided Taylor Morrison a copy of the User Questionnaire and the Helpful Documents checklist. Mr. Ryan Hatheway, Taylor Morrison, completed and returned the documents to WKA. Discussion regarding his responses is provided in the following section. A copy of the completed questionnaire is included in Appendix B.

In summary, Mr. Hatheway was not aware of any records of environmental liens or AULs currently recorded against the Site. Mr. Hatheway stated he does not possess specialized knowledge or experience related to the Site. Mr. Hatheway stated that he is not aware of any obvious indicators that point to the presence or likely presence of contamination at the Site.

Mr. Hatheway was aware of existing “Helpful Documents” as defined in Section 10.8 of the ASTM Standard as noted on the “Helpful Documents Checklist” included in Appendix B. These reports are summarized in Section 4.2.10.

2.0 SITE DESCRIPTION

2.1 Site and Vicinity General Characteristics

The Site is located along Wyland Drive in Elk Grove, California (Figures 1 and 2). The Site is comprised of Sacramento County Assessor's Parcel Number (APN): 134-0110-177, totaling 10.31 acres of vacant land (Figure 3). Surrounding land use consisted of residential developments (Figure 4).

2.2 Site Reconnaissance

A visual site reconnaissance was conducted by WKA on June 28, 2022. Figures 5a and 5b provide color photographs of the Site taken during the site reconnaissance.

On the day of site reconnaissance, the Site was vacant land. The majority of the Site's surface was covered by low-lying, dry vegetation. WKA observed an inactive well, concrete stand-pipe, and small pile of debris on the northeastern portion of the Site. The pile of debris consisted of vegetative material and wood pieces.

2.2.1 Municipal Infrastructure and Utilities

Sacramento Municipal Utility District (SMUD) provides electricity to the Site vicinity. Pacific Gas and Electric (PG&E) provides natural gas to the Site vicinity. The City of Elk Grove provides potable water and sanitary sewer service to the Site vicinity.

2.3 Adjoining Properties

The Site is bounded to the north and west by residences. Wyland Drive followed by residences is located adjacent to the east of the Site. The Site is bounded to the south by Wayne Heintz Street followed by residences.

3.0 INTERVIEWS

Interviews with various persons familiar with the site vicinity, including representatives of public agencies, were conducted for the purpose of identifying past and present uses, which may have contributed to RECs on the Site. Results of those interviews are discussed in the following sections.

3.1 Owner or Key Site Manager

WKA provided a questionnaire regarding the Site to Mr. Johan Otto, property owner. Mr. Otto completed the questionnaire and returned it to WKA. According to Mr. Otto, he acquired the Site approximately 50 years ago. He stated that the historical use of the property was cattle grazing and that it is currently vacant land. Mr. Otto stated that no soil has been imported to the Site. He said that he does not have information indicating that any underground or aboveground storage tanks been located at the Site. Mr. Otto stated that, to the best of his knowledge, no environmental liens have been recorded for the Site.

3.2 Occupants (Multi-family or Major)

The Site is not occupied; therefore, no residents were interviewed.

3.3 Past Owners, Operators, and/or Occupants

No information regarding past owners, operators, and/or occupants was received by WKA during the completion of this report.

3.4 State and/or Local Government Officials

WKA contacted the Sacramento County Environmental Management Department (SCEMD), regarding any regulatory files available for the surrounding facilities. A representative with SCEMD provided available files for review on the SCEMD NextRequest website. Information reviewed on the SCEMD NextRequest website is provided in Section 4.3.1.

The State Water Resources Control Board (SWRCB) publishes its records on their GeoTracker website. When records are unavailable on GeoTracker, WKA makes direct contact to request unpublished documents from the SWRCB. WKA reviewed information for facilities within the vicinity of the Site on the GeoTracker website and a summary is provided in Section 4.3.1.

The Department of Toxic Substances Control (DTSC) publishes its records on their EnviroStor website. When records are unavailable on EnviroStor, WKA makes direct contact to request

unpublished documents from the DTSC. WKA reviewed information for facilities within the vicinity of the Site on the DTSC EnviroStor website and a summary is provided in Section 4.3.1.

3.5 Abandoned Properties

As referenced in 40 CFR Part 312, in the case of inquiries conducted at "abandoned properties," as defined in §312.23(d), "where there is evidence of potential unauthorized uses of the Site or evidence of uncontrolled access to the Site, the environmental professional's inquiry must include interviewing one or more (as necessary) owners or occupants of neighboring or nearby properties from which it appears possible to have observed uses of, or releases at, such abandoned properties…" No evidence of potential unauthorized uses, or evidence of uncontrolled access to the Site was observed. The Site is not considered an abandoned property and therefore, WKA did not interview owners or occupants of neighboring properties.

4.0 RECORDS REVIEW

The purpose of the records review is to obtain and review information concerning the current and historical use of the Site and adjoining properties that would help identify the presence of RECs in connection with the Site. The records review included review and discussion of the following, as available:

- Physical Setting Source(s);
- Historical Use Information; and,
- Environmental Record Sources.

4.1 Physical Setting Source(s)

The Site is depicted on the 1979 United States Geological Survey (USGS) 7.5 Minute topographic map of the *Elk Grove, California Quadrangle* as undeveloped land. The Site is located within Section 5, Township 6 North, Range 6 East, Mount Diablo Base and Meridian, at an elevation of approximately +50 feet relative to mean sea level (msl).

4.1.1 Regional and Local Geology

The Site is located in the Great Valley geomorphic province of California, a 500-mile, northwest-trending structural trough, generally constrained to the west by the Coast Ranges and to the east by the foothills of the Sierra Nevada Range (Norris and Webb, 1990). The Great Valley consists of two valleys lying end-to-end, with the Sacramento Valley to the north and the San Joaquin Valley to the south.

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and terrestrial sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 25,000 feet in the south-central portion of the Great Valley (Norris and Webb, 1990). The sedimentary geologic formations of the Great Valley province vary in age from Jurassic to Quaternary, with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their primary source being the Sierra Nevada Range.

The 1981 California Division of Mines and Geology *Geologic Map of the Sacramento Quadrangle, California*, shows the Site to be underlain by the Riverbank Formation consisting of Pleistocene alluvial gravels, sands, silts and clays.

4.1.2 Radon Gas

Radon is a naturally occurring gas that is formed from the radioactive breakdown of radium in soil, rock, and water. Radon can move up through the ground and into living spaces through pathways and penetrations in a structure's foundation. Radon's potential presence in indoor air can only be assessed within existing buildings, as there are no currently available real time methods to assess Radon's presence over undeveloped properties.

The United States Environmental Protection Agency (EPA) has developed the EPA Map of Radon Zones to assist organizations in implementing radon-resistant building codes. The map assigns each county in the United States to one of three zones based on radon potential. The EPA uses a continuous exposure level of 4.0 picoCuries per liter (pCi/L) as an action level at which additional action is recommended.

The EPA Radon Zones are defined as:

- Zone 1 (Highest Potential) – Average indoor radon screening level greater than 4 pCi/L.
- Zone 2 (Moderate Potential) – Average indoor radon screening level between 2 and 4 pCi/L.
- Zone 3 (Lowest Potential) – Average indoor radon screening less than 2 pCi/L.

According to information provided by Environmental Data Resources in the Radius Map Report, the Site is located in Zone 3 (EDR, 2022a).

4.1.3 Soil Survey

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) has created a web-based service for accessing soil information. According to the NRCS Web Soil Survey (WSS) the majority of the near-surface soils on the Site consist of San Joaquin-Durixeralfs complex, 0 to 1 percent slopes; and San Joaquin silt loam, leveled, 0 to 1 percent slopes (USDA, 2022). A copy of the Custom Soil Resource Report for the Site is provided in Appendix C.

4.1.4 Regional and Local Groundwater

The Site is located within the California Department of Water Resources (DWR) defined Sacramento Valley Groundwater Basin of the Sacramento River Hydrologic Region. WKA searched data on the DWR website and found no DWR monitored groundwater wells within one-half mile of the Site (DWR, 2022).

WKA also searched the State Water Resources Control Board's (SWRCB) GeoTracker website for quarterly groundwater monitoring reports completed for facilities in the immediate vicinity of the Site. No facilities are located within one-half mile of the Site (SWRCB, 2022).

4.2 Historical Use Information

WKA reviewed historical information to develop a history of the previous uses of the Site and surrounding area, in order to evaluate the Site and adjoining properties for evidence of RECs. Standard historical sources reviewed during the preparation of this report included the following, as available:

- Sanborn® Maps;
- Topographic Maps;
- Oil and Gas Well Maps;
- Aerial Photographs;
- Ownership Records;
- Building Department Records;
- Local Street Directories;
- Zoning and Land Use Records;
- Other Historical Sources; and,
- Prior Assessments.

Discussion of these historical sources is provided in the following sections.

4.2.1 Sanborn® Maps

Sanborn® Maps are obtained through Environmental Data Resources, Inc. (EDR®). EDR® is a national commercial provider of environmental database information. Sanborn® Maps are detailed drawings of site development, and were typically used by fire insurance companies to determine site fire insurability. According to EDR®, Sanborn® Map coverage of the Site is not available (EDR®, 2022b). The EDR® Sanborn® Map Report is provided in Appendix C.

4.2.2 Topographic Maps

Historical USGS topographic maps with coverage of the Site and outlying land areas were reviewed. Topographic maps with coverage of the Site dated 1894, 1909/1910, 1941, 1947, 1968, 1975, 1979/1980, 2012, 2015, and 2018 were available for review (EDR®, 2022c). Copies of the topographic maps compiled by EDR® with coverage of the Site are included in Appendix C. Table 1 notes the changes in the vicinity of the Site.

Table 1		
Year	**Scale**	**Observations**
1894	1:125,000	Site: Vacant land. North: Vacant land. East: Vacant land. South: Vacant land. West: Vacant land.
1909/ 1910	1:31,680	No significant changes noted for the Site or the vicinity.
1941	1:62,500	No significant changes noted for the Site or the vicinity.
1947	1:50,000	No significant changes noted for the Site or the vicinity.
1968	1:24,000	No significant changes noted for the Site or the vicinity.
1975	1: 24,000	No significant changes noted for the Site or the vicinity.
1979/ 1980	1:24,000	No significant changes noted for the Site or the vicinity.
2012	1:24,000	Site: No significant changes noted. North: The existing subdivision roads are depicted. East: No significant changes noted. South: No significant changes noted. West: No significant changes noted.
2015	1:24,000	No significant changes noted for the Site or the vicinity.
2018	1:24,000	No significant changes noted for the Site or the vicinity.

4.2.3 Oil and Gas Well Maps

Review of California Geologic Energy Management Division (CalGEM) Well Finder website showed that the Site is not located in a designated natural gas field. No CalGEM wells are located on or within at least one-half mile of the Site (CalGEM, 2022).

4.2.4 Aerial Photographs

Historical aerial photographs of the Site and general vicinity were compiled by EDR®. Photographs covering the years 1937, 1947, 1957, 1964, 1966, 1972, 1984, 1993, 1998, 2006, 2009, 2012, and 2016 were available for review (EDR®, 2022d). Copies of the aerial photographs compiled by EDR® with coverage of the Site are included in Appendix C. In addition, WKA

reviewed aerial imagery available on Google Earth, dated June 2021. Table 2 notes the changes on the Site and in the vicinity.

Table 2

Year	Scale	Observations
August 1937	1" = 500'	Site: Ground markings indicating dry farm crop cultivation are visible. North: Ground markings indicating dry farm crop cultivation are visible. East: Ground markings indicating dry farm crop cultivation are visible. South: Ground markings indicating dry farm crop cultivation are visible. West: Ground markings indicating dry farm crop cultivation are visible.
July 1947	1" = 500'	Site: Fallow land. North: Fallow land. East: Ground markings indicating irrigated pasture are visible. South: Fallow land. West: Fallow land.
September 1957	1" = 500'	Site: Ground markings indicating irrigated pasture are visible. North: Ground markings indicating irrigated pasture are visible. East: No significant changes noted. South: Ground markings indicating irrigated pasture are visible. West: Ground markings indicating irrigated pasture are visible.
May 1964	1" = 500'	No significant changes noted for the Site or the vicinity.
August 1966	1" = 500'	No significant changes noted for the Site or the vicinity.
June 1972	1" = 500'	No significant changes noted for the Site or the vicinity.
June 1984	1" = 500'	No significant changes noted for the Site or the vicinity.
May 1993	1" = 500'	No significant changes noted for the Site or the vicinity.
1998	1" = 500'	No significant changes noted for the Site or the vicinity.
2006	1" = 500'	Site: Grass-covered land. North: Residences are visible. East: No significant changes noted. South: Grass-covered land. West: Grass-covered land.
2009	1" = 500'	No significant changes noted for the Site or the vicinity.

Table 2		
Year	**Scale**	**Observations**
2012	1" = 500'	No significant changes noted for the Site or the vicinity.
2016	1" = 500'	No significant changes noted for the Site or the vicinity.
June 2021 (Google Earth ™)	Not to Scale	Site: No significant changes noted. North: No significant changes noted. East: Wyland Drive followed by residences. South: Wayne Heintz Street followed by residences. West: Residences are visible.

4.2.5 Ownership Records

Ownership information was obtained through ParcelQuest®, an online distributor of "Assessor-Direct property information throughout the State of California." The ownership entity for the Site was listed as "Johan/Anne Otto Trust Raymond/Gloria Melvic Surviving Spouses Trust" (ParcelQuest®, 2022).

4.2.6 Building Department Records

The Site has not been developed; therefore, building department records were not researched.

4.2.7 Local Street Directories

Local street directories with coverage of the Site and adjoining properties were obtained from EDR® (EDR®, 2022e). These documents contain business listings based on street number identifiers. The Site parcel has not been assigned an address; therefore, it would not have been listed in city directories. The adjoining properties are currently developed with residences and were historically undeveloped. A copy of the EDR® City Directory (EDR®, 2022e) is provided in Appendix C.

4.2.8 Zoning and Land Use Records

The Site use is listed as vacant (ParcelQuest, 2022).

The Site is located within an area of minimal flood hazard, as designated by the Federal Emergency Management Agency (FEMA). The floodplain map is provided in Appendix C.

WKA reviewed data provided on the National Pipeline Mapping System website and identified one pipeline within one-half mile of the Site. The pipeline is located approximately 0.3 miles southeast of the Site. The pipeline is reportedly operated by SFPP, LP and is a "non highly volatile liquid" transmission line (NPMS, 2022).

4.2.9 Other Historical Sources

Review of additional historical sources was not warranted in order for the Environmental Professional to make a determination as to evidence of potential RECs on the Site.

4.2.10 Prior Assessments

WKA prepared a Phase I ESA, dated June 14, 2017, for the Crooked Creek Estates East Subdivision. The Site is located within the Crooked Creek States East Subdivision (Subdivision). According to WKA, the Subdivision had been used for dry farm crop cultivation or pastureland from at least 1937 to at least 2017. WKA concluded that no evidence of RECs had been identified for the Subdivision.

4.3 Environmental Record Sources

4.3.1 Regulatory Agency Databases

EDR® was contacted to provide a summary of facilities listed on regulatory agency databases (EDR®, 2022a). Table 3 summarizes the researched ASTM required *Standard Environmental Record Sources*, as well as several *Additional Environmental Record Sources*, as defined in Sections 8.2.2 and 8.2.4 of the ASTM Standard. For additional reference, the EDR® Radius Map Report with GeoCheck is included in Appendix D.

Table 3

	EDR Listed Database	*ASTM E 1527-21 Search Distance*	No. of Facilities Listed (within Search Radius)
Federal			
Federal NPL Site List	*NPL*	1-mile	0
Federal Delisted NPL Site List	*Delisted NPL*	½-mile	0
Federal CERCLIS List	*CERCLIS*	½-mile	0
Federal CERCLIS NFRAP Site List	*CERCLIS NFRAP*	½-mile	0
Federal RCRA CORRACTS Facilities List	*CORRACTS*	1-mile	0
Federal RCRA Generators List:			

Table 3			
	EDR Listed Database	*ASTM E 1527-21 Search Distance*	No. of Facilities Listed (within Search Radius)
Small Quantity and Large Quantity Generators	*RCRA SQG*	Site & adjoining	0
	RCRA LQG		0
Landfills and Solid Waste Management Units	*RCRA TSDF*	½-mile	0
Federal Institutional Control / Engineering Control Registries	*US ENG Controls*	Site only	0
	US INST Controls		0
Federal ERNS List	*ERNS*	Site only	0
State			
State-equivalent NPL (Hist. Cal-Sites)	*Hist. Cal-Sites*	1-mile	0
State-equivalent CERCLIS	*RESPONSE*	½-mile	0
State Landfill and/or Solid Waste Disposal Site	*SWF/LF (SWIS)*	½-mile	0
	WMUDS/SWAT		0
State Leaking Underground Storage Tanks	*LUST- Reg 5 Geotracker*	½-mile	2
Tribal Leaking Underground Storage Tanks	*Indian LUST*	½-mile	0
State Registered Underground Storage Tanks	*UST*	Site & adjoining	0
Tribal Registered Underground Storage Tanks	*Indian UST*	Site & adjoining	0
State Registered Aboveground Storage Tanks	*AST*	Site & adjoining	0
State Institutional Control Registries	*DEED*	Site only	0
State Voluntary Cleanup Sites	*VCP*	½-mile	0
State Brownfield Sites	*US Brownfields*	½-mile	0
California Environmental Reporting System Hazardous Waste	*CERS Haz Waste*	¼-mile	0
Additional Environmental Record Sources			
Hazardous Waste & Substances Sites List	*CORTESE*	½-mile	1
DTSC EnviroStor (includes Cal-Sites)	*EnviroStor*	1-mile	2
SLIC	*SLIC - Reg 5*	½-mile	0
Cleaner Facilities	*Drycleaners*	¼-mile	0
HAZNET	*HAZNET*	¼-mile	1
Local - County			
Sacramento County Contaminated Sites	*Sac Co CS*	½-mile	1
Sacramento County Master List	*Sac Co ML*	½-mile	0

Review of the EDR® report indicates the Site is not listed on any of the EDR® databases; however, WKA identified a proposed school property at the Site on the Department of Toxic Substances Control's EnviroStor. Regulatory information reviewed concerning the Site, and the nearest facility in each cardinal direction identified within its respective ASTM search distance is detailed below.

The EDR Radius Report identified one Department of Toxic Substances Control (DTSC) Haznet listings within 0.25 miles of the Site. The DTSC Haznet database is a list of all facilities that have submitted manifests for the disposal of hazardous waste at a landfill. A listing on the database is not considered to be indicative of a release of a hazardous material or petroleum product at a property.

The Proposed Crooked Creek Elementary School Property, Northwest Corner of Wayne Heintz Street and Wyland Drive, was located at the Site. The Property was identified on the Department of Toxic Substances Control's (DTSC) EnviroStor database. The Property was evaluated as a proposed school site. WKA reviewed a DTSC letter, dated March 25, 2020. DTSC stated that a Phase I ESA, dated February 27, 2000, was prepared for the Property by Placeworks. DTSC noted that the Phase I ESA indicated that the historical use of the Property was pastureland and dry farm crop cultivation. According to the DTSC, the Phase I ESA concluded that no evidence of RECs had been identified for the Property and no further assessment was recommended. The DTSC concurred with the findings of the Phase I ESA. Based on the information reviewed, this Property has not impacted the Site.

The Residence facility, 9800 Waterman Road, was located 0.19 miles north of the Site. The facility is listed on the State Water Resources Control Board's (SWRCB) Leaking Underground Storage Tank database. According to Sacramento County Environmental Management Department (SCEMD) letter, dated April 29, 2003, the facility received a no further action status regarding the removal of underground storage tanks. Based on the information reviewed, this facility has not impacted the Site.

The Kingsford Products Company, 10000 Waterman Road, was located 800 feet west of the Site. The facility is listed on the SWRCB LUST and Recovered Government Archives LUST databases. According to a SWRCB letter, dated January 17, 1996, the SWRCB concurred with the request for closure of the locations where underground storage tanks had been removed from the facility. Based on the information reviewed, this facility has not impacted the Site.

4.3.2 Preliminary Screen for Vapor Encroachment Conditions

WKA conducted a preliminary screening for VEC beneath the Site using the Tier 1 vapor encroachment screening evaluation[1]. The Tier I screening included performing a *Search Distance Test* to identify if there are any known or suspect contaminated properties surrounding or upgradient of the Site within specific search radii, and a *Chemicals of Concern (COC) Test* (for those known or suspect contaminated properties identified within the *Search Distance Test*)

[1] The Preliminary Screen for Vapor Encroachment Conditions was based on the guidelines presented in the ASTM *E 2600-15 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*.

to evaluate whether or not COC are likely to be present. The Vapor Encroachment Screening Matrix is included in Appendix E.

Based on the completion of the VEC-screening matrix, a VEC can be ruled out because a VEC does not or is not likely to exist.

4.3.3 Environmental Lien Search

According to a June 27, 2022, Environmental Lien Search Report prepared by Security First Title Resource, no environmental liens or activity or use limitations (AULs) were recorded for the Site (SFTR 2022). A copy of the Environmental Lien Search Report is included in Appendix C.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Data Gaps

The time intervals between the Standard Historical Sources (i.e., topographic maps, aerial photographs, other historical sources) exceeded the ASTM minimum five-year period. However, the use of the Site appears unchanged within the time gaps, and therefore, research of the Site use during the time gaps is not required by the ASTM Standard (Refer to *Section 8.3.5 – Intervals* of the ASTM E 1527-21 standard).

It is the opinion of WKA that no significant data gaps were identified during the preparation of this report that affects the ability of the Environmental Professional to identify RECs on the Site.

5.2 Conclusions

- The historical land use research dating back to the early 1900s revealed that the Site has been used for dry farm crop cultivation or pastureland since at least 1937.
- An inactive well was observed on the northeastern portion of the Site.
- A debris consisting of vegetative material and wood was observed on the northeastern portion of the Site.
- According to an environmental lien search, no environmental liens are associated with the Site.
- Given the documentation reviewed concerning the agency listings for neighboring facilities, none of the facilities reviewed is likely to have a negative impact on the Site.
- Based on the completion of the vapor encroachment condition (VEC) screening matrix, WKA concludes a VEC can be ruled out because a VEC does not or is not likely to exist.

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-21 for the Milestone II Property. Any exceptions to, or deletions from, this practice are described in Section 5.4 of this report. This assessment has revealed no evidence of RECs in connection with the Site.

5.3 Recommendations

Based on the conclusions presented and the documentation contained herein, no further assessment is warranted at this time. The inactive well located on the northeastern portion of the Site should be properly abandoned in accordance with local, state, and federal regulations. The observed concrete standpipe is evidence that an underground irrigation water distribution

system may exist within the Site. The distribution system should be dismantled and collected for disposal. If the system is constructed of asbestos-containing concrete pipe, the asbestos-containing material must be collected and properly disposed. The debris pile observed on the northeastern portion of the Site should be properly disposed.

5.4 Exceptions and/or Deletions

No exceptions or deletions from the ASTM E 1527-21 standard were made during the performance of this ESA.

5.5 Additional Services

Non-scope considerations, such as assessment for naturally occurring asbestos (NOA), wetlands evaluation, indoor air quality, laboratory testing of the soils and groundwater beneath the Site for environmental contaminants (such as agricultural-related pesticides, termiticides, polychlorinated biphenyls [PCBs], or arsenic and lead), and assessments for asbestos containing materials and lead-based paint were not included or requested as part of this ESA. Additionally, this ESA included conducting a Tier 1 vapor encroachment screening in accordance with the ASTM *E 2600-15 Vapor Encroachment Screening on Property Involved in Real Estate Transactions.*

6.0 LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made only on the date of the field reconnaissance, June 28, 2022. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. Information regarding the Site that is *publicly available* and *practically reviewable,* as described in the ASTM standard, was obtained. The conclusions in this report should be reevaluated if site conditions change or new information becomes available. No recommendation is made as to the suitability of the Site for any purpose. The results of this assessment do not preclude the possibility that materials currently or in the future defined as hazardous are present on the Site, nor do the results of this work guarantee the potability of groundwater beneath the Site. This report is applicable only to the investigated Site and should not be used for any other property. No warranty is expressed or implied.

This report is viable for one year from the publication date of the report provided the following components are updated within 180 days of the date of purchase or (for transactions not involving an acquisition) the date of the intended transaction:

- Interviews with current owners/occupants and/or in order to identify changes in Site conditions or uses since the publication date of this report
- Searches for recorded environmental cleanup liens
- Visual inspection of the Site and of adjoining properties with emphasis on changes in conditions or uses since the publication date of this report
- A current review of federal, state, tribal and county databases
- The declaration by the environmental professional responsible for the assessment.

Environmental Site Assessments completed more than 180 days prior to the date of purchase must be reviewed and updated in order for the *Environmental Site Assessment* to be considered valid per Section 4.6 (*Continued Viability of Environmental Site Assessment*), and Sections 4.7 and 8.4 (*Prior Assessment Usage*) of the ASTM E 1527-21 Standard.

NMM:DBN:cd
H:/dept3/4640.2200088.0000 - Phase I ESA Milestone II Property

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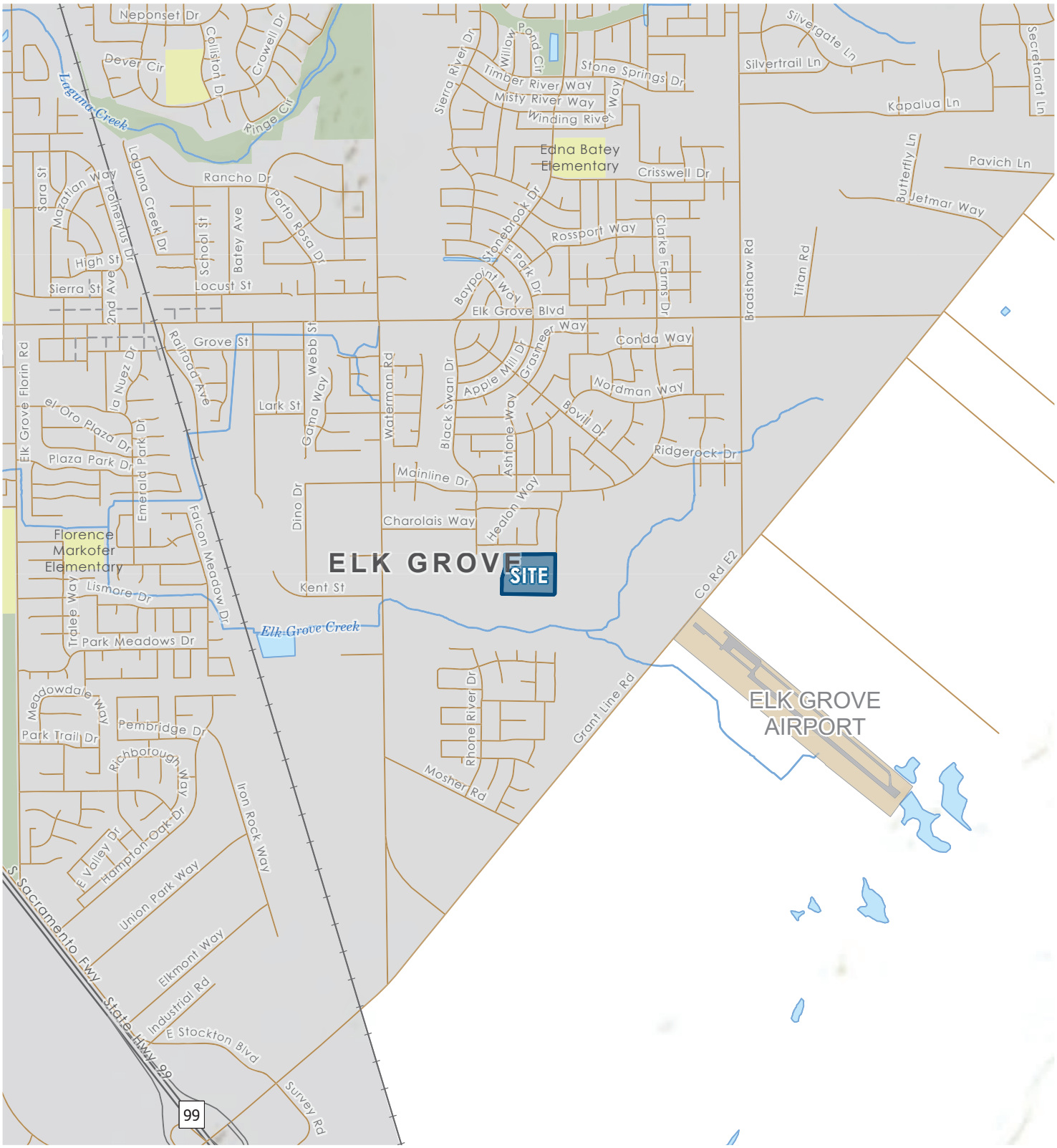
FIGURES



Spatial Data provided by Esri, NOAA, and USGS.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

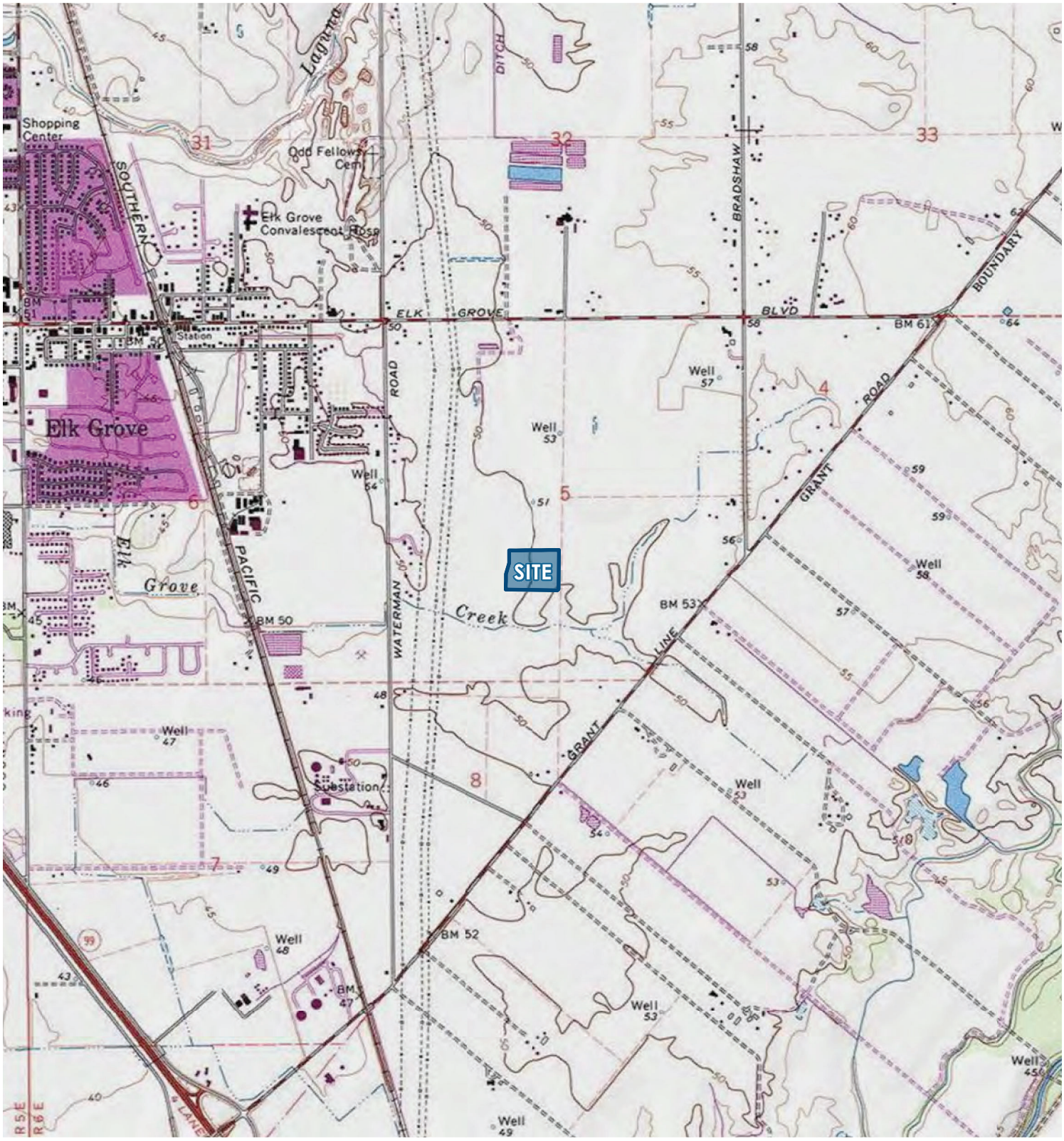
WallaceKuhl & Associates — A Universal Engineering Sciences Company

VICINITY MAP

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	1
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	



Topographic Basemap Adapted from the USGS 7.5' Digital Map Series
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

WallaceKuhl & Associates — A Universal Engineering Sciences Company

TOPOGRAPHIC MAP

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	2
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	



Parcel Data provided by Sacramento County Assessors Office
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

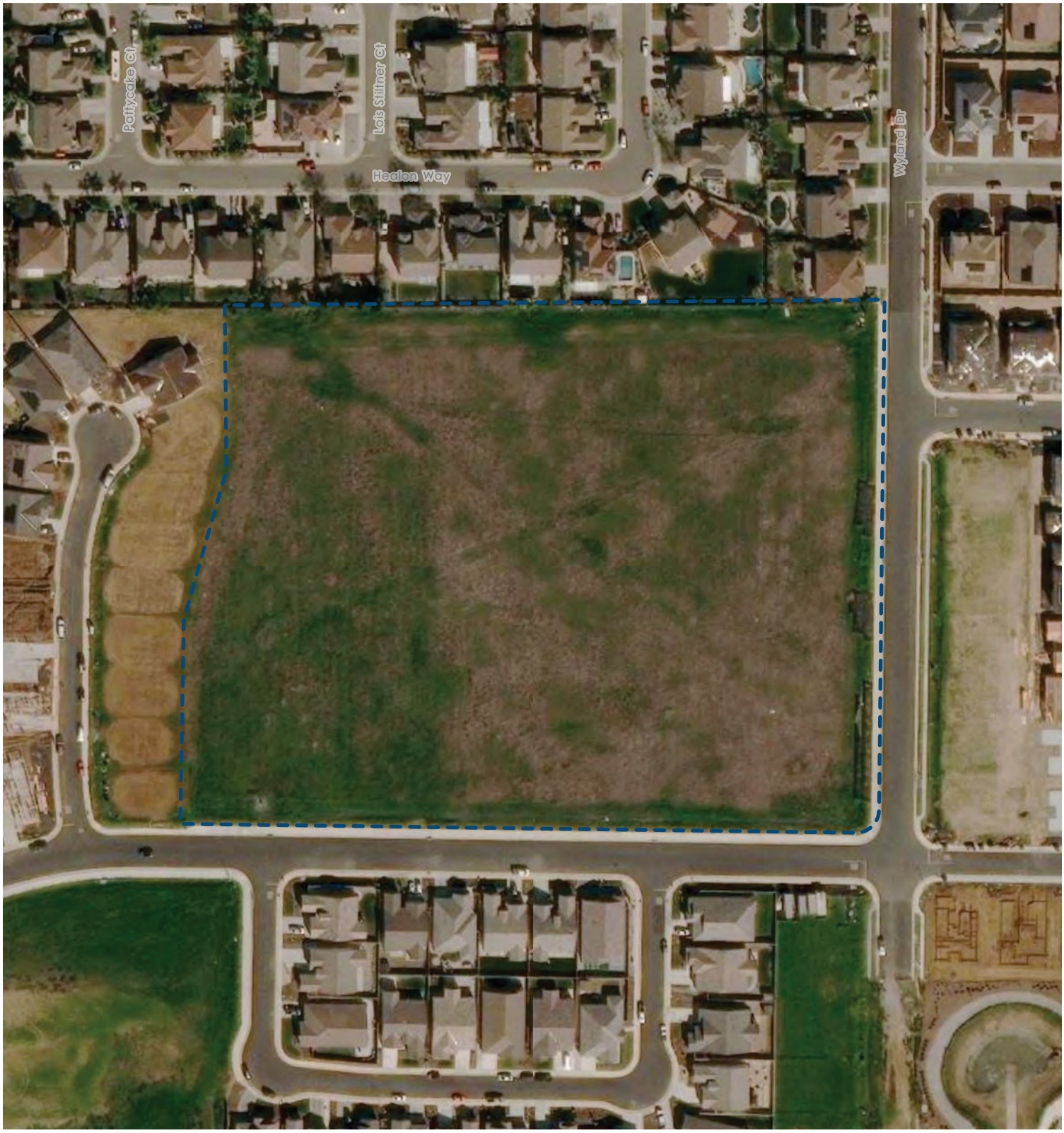
WallaceKuhl & Associates — A Universal Engineering Sciences Company

PARCEL MAP

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	3
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	



Approximate Site Boundary

N

0 75 150
Feet

Aerial imagery provided by Esri.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

WallaceKuhl & Associates — A Universal Engineering Sciences Company

AERIAL SITE MAP

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	4
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	



Looking southwest at the general view of the Site.



Looking at an inactive well located on the northeastern portion of the Site.



Looking at a concrete standpipe located on the northeastern portion of the Site.



Looking at a debris pile located on the northeastern portion of the Site.

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COLOR PHOTOGRAPHS

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	5a
DRAWN BY	NMM
CHECKED BY	DBN
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	



Looking west at the southern portion of the Site.



Looking northwest at the general view of the Site.



Looking north at the western portion of the Site.



Looking east at the northern portion of the Site.

WallaceKuhl & ASSOCIATES

A Universal Engineering Sciences Company

COLOR PHOTOGRAPHS

MILESTONE II PROPERTY

Elk Grove, California

FIGURE	5b
DRAWN BY	NMM
CHECKED BY	DBN
PROJECT MGR	NMM
DATE	06/2022
4640.2200088.0000	

APPENDIX A
RESUMES

NANCY M. MALARET

PROJECT ENVIRONMENTAL SCIENTIST

Ms. Malaret has been employed in the environmental field since 2003. She graduated from University of California, Davis with a degree in Hydrologic Science.

Ms. Malaret worked for the Florida Department of Health for four years. She assisted with the coordination of sampling potable water wells throughout the state of Florida. Ms. Malaret used GIS mapping techniques to identify private potable wells located near commercial and industrial facilities that may have contaminated the groundwater. She coordinated the sampling of the wells and the analysis of water samples collected. She worked with the Florida Department of Environmental Protection to place filters on the private wells with contaminated water. Ms. Malaret also worked with the Health Assessment Team at the Florida Department of Health. She conducted human health risk assessments based on groundwater and soil data collected during contamination assessments of industrial facilities. Ms. Malaret used the Agency for Toxic Substances and Disease Registry's Public Health Assessment Guidelines to evaluate resident's risk of illness from exposure to contaminated groundwater and surface soils. Ms. Malaret used Risk Assistant software to determine dose estimates and compared the results with toxicological studies. Ms. Malaret's human health risk assessments focused on sites with Volatile Organic Compounds, Semi-volatile Organic Compounds, and metals contamination.

Ms. Malaret has six years of experience in due diligence. Her Phase I Environmental Site Assessment experience includes wooded, rural, and urban properties. Her investigations have involved multiple parcel sites with extensive history, large-scale residential subdivisions, office buildings, gasoline stations, dry cleaners, and heavy equipment manufacturing and repair facilities. Ms. Malaret has conducted multiple corridor assessments along roadways being prepared for expansion or improvements. She also conducted a Hazardous, Toxic, and Radioactive Waste Assessment for the United States Army Corps of Engineers on a 20-mile stretch of the St. Johns River in Jacksonville, Florida. Ms. Malaret conducted soil and groundwater sampling associated with Phase II Environmental Site Assessments. Ms. Malaret coordinated long-term groundwater sampling events for sites with residual petroleum contamination.

Ms. Malaret has worked with communities impacted by contamination, local, state, and federal government agencies, banks and developers.

Moody Property, Vacaville, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 38.5-acre property of undeveloped land located in Vacaville to support the redevelopment of the property into a residential development.

Woodmere Property, Folsom, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 2.5-acre property developed with an office building. Historical research of the property included evaluating former mining operations at the site.

Mercantile Property, Rancho Cordova, CA: Ms. Malaret managed the Phase I Environmental Site Assessment of a 4.1-acre property developed with a commercial building. Evaluation of regulatory facilities within the site vicinity included the former Aerojet Facility.

HIGHER EDUCATION:

University of California, Davis
Bachelor of Science, Hydrologic Science (1999)

WallaceKuhl & ASSOCIATES | A Universal Engineering Sciences Company

DENNIS B. NAKAMOTO

SENIOR HYDROGEOLOGIST

Mr. Nakamoto manages Wallace-Kuhl & Associates' Environmental Department. He has over 35 years of experience in completing chemical contaminant and groundwater studies. Mr. Nakamoto's experience began with underground mapping, open pit mining and milling operations at sites in California, Nevada and Idaho. Mr. Nakamoto monitored the third environmental boring in connection with investigating soil, soil vapor and groundwater contamination at the Aerojet General Corporation rocket facility in Rancho Cordova, California (Aerojet). Mr. Nakamoto, over an eight-year period at Aerojet, was responsible for interpreting geologic samples and geophysical data in support of designing over 1,000 wells, comprised of extraction, recharge and monitoring wells, including nested, multiple completion monitoring wells.

Mr. Nakamoto was responsible for environmental studies at railyards operated by the former Southern Pacific Transportation Company and the Union Pacific Railroad. Mr. Nakamoto's was the Environmental Oversight Authority (EOA) during construction of the Robert Matsui Federal Courthouse and the 7th Street Extension, both projects on land formerly designated as part of the Union Pacific Sacramento Locomotive Works Superfund site, Sacramento, California. The EOA had authority to act on behalf of the Department of Toxic Substances Control, Central Valley Regional Water Quality Control Board, Sacramento County Environmental Health Department and the City of Sacramento on chemical discoveries during construction.

Mr. Nakamoto's experience with groundwater exploration began in 1978 with a successful mapping and interpreting of hydrogeologic conditions that resulting in finding of viable groundwater resources in the Spanish Springs area north of Reno, Nevada. His more recent experience includes the hydrogeologic study at the Elk Grove Unified School District's Cosumnes River Elementary School. He has lead studies to verify that aquifer resources were sufficient to support proposed developments; to interpret hydrogeologic interactions between surface water bodies, chemicals arising from sources such as discharges to the environment and septic disposal facilities; and, impacts of land development on groundwater resources. He has completed hydrogeologic studies in support of permitting surface mining activities, designing new production wells, modeling proposed contaminant capture systems, and developing groundwater resources.

Mr. Nakamoto studies volatile and semi-volatile organic chemicals, polynuclear aromatic hydrocarbons, metals (including hexavalent chromium and arsenic), asbestos, pH, agricultural chemicals and petroleum hydrocarbons in soil, soil vapor or groundwater arising from activities at facilities ranging from railyards, military, dry cleaning, wood treating, agricultural, and manufacturing. He interprets geophysical data from electrical resistivity, spontaneous potential, background radiation, source radiation (when approved for use), ground penetrating radar, magnetic and gravity surveys, using downhole and surface arrays. His studies are completed under oversight by either the United States Environmental Protection Agency, Department of Toxic Substances Control, one of the nine Regional Water Quality Control Boards, County Agencies or one of the several local oversight program agencies. He has investigated facilities such as: surface impoundments, former and active landfills, grit blasting, solvent cleaning, asbestos application and removal, lead acid battery maintenance, smelting activities, and petroleum hydrocarbon fuel refining, storage and dispensing, and agriculture operations throughout California.

Mr. Nakamoto prepares Human Health Risk Assessments based on statistical evaluations of data to advocate for the most efficient strategy for mitigating chemical concentrations at a site. Mr. Nakamoto has successfully defended Human Health Risk Assessments, including Trespasser Scenarios to Department of Toxic Substances Control Office of Human and Ecological Risk Division (HERD) and Human Health Risk (HERO) staff and Local Oversight Agencies. He has completed studies and prepared Asbestos Dust Mitigation Plans at numerous sites impacted by Naturally Occurring Asbestos. He is responsible for Phase I Environmental Site Assessment Reports.

DENNIS B. NAKAMOTO
SENIOR HYDROGEOLOGIST

SELECTED PROJECT EXPERIENCE:

- Lead and Petroleum Hydrocarbon Fuels, Former Crystal Cream and Butter Facility, Risk to Residential land use, Sacramento, California
- Arsenic Trespasser Risk Scenario, Fox Hill Lane Estates, Risk to Residential land use, Newcastle, California
- Hydrogeologic Study, Cosumnes River Elementary School, Surface Water to Groundwater impacts, Rancho Murrieta, California
- Dieldrin, Chlordane and Lead, Risk-Based Cleanup Determination, Sacred Heart Elementary School, Sacramento, California
- Environmental Oversight Authority, 7th Street Extension and Federal Courthouse, Development following Certified RAP, Sacramento, CA

Preliminary Endangerment Assessments

- Eureka School, Granite Bay
- Thermalito Union School District, Oroville
- Shubin Property, Vacaville
- Pan Pacific Property, Woodland

Railroad Transportation Facilities

- Oroville Railyard
- Stockton Railyard
- Sacramento Locomotive Works
- Imlay Locomotive Refueling Yard
- Portola Railyard
- Curtis Park Railyard

HIGHER EDUCATION:

University of California, Davis, California
B.S. Geology (1977)

PROFESSIONAL REGISTRATIONS:

California
Professional Geologist No. 3863
Certified Engineering Geologist No.1353
Certified Hydrogeologist No. 260
Oregon
Professional Geologist and an Engineering Geologist No. E 1535
Wyoming
Professional Geologist No. PG 2157
Louisiana
Professional Geoscientist No. To be assigned.

APPENDIX B

ASTM E 1527-21 User Questionnaire
and Helpful Documents Checklist

HELPFUL DOCUMENTS
MILESTONE II PROPERTY

Are you aware of any of the below-listed reports, as they relate specifically to the property?

_____ Yes ____ No (if yes, please check all that apply):

- [x] Environmental Site Assessment reports (Phase I ESA, Asbestos sampling reports, etc.)
- [ ] Environmental Compliance Audit reports
- [x] Geotechnical Reports
- [ ] Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)
- [ ] Registrations for underground or above ground storage tanks
- [ ] Registrations for underground injection systems
- [ ] Material Safety Data Sheets
- [ ] Community Right-to-Know plan
- [ ] Safety Plan
- [ ] Reports regarding Hydrogeologic conditions on the property or surrounding area
- [ ] Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
- [ ] Hazardous waste generator notices, or reports
- [ ] Environmental Impact Reports (draft and/or final)
- [ ] Risk assessments
- [ ] Recorded AULs

If any of the above listed documents are available, will copies be provided to WKA for review?

__x__ Yes ____ No **WKA completed the noted reports and should have them on file.**

Completed by **Ryan Hatheway**

Date: **June 20, 2022**

Title: **Director, Land Acquisition**

Signature: *Ryan Hatheway*

E 1527-21 USER QUESTIONNAIRE
MILESTONE II PROPERTY

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user*[2] must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

(1.) Have you performed a search for environmental cleanup liens and AULs, as described under *User Obligations* in the attached proposal, for the *property?*

No.

(2.) Are you aware of any environmental cleanup liens against the *property* that are filed or recorded under federal, tribal, state, or local law?

No.

(3.) Are you aware of any AULs, 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?

No.

(4.) As the *user* of the report, 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 the chemicals and processes used by this type of business?

Yes, the surrounding property was a residential development and the same is intended for this property.

(5.) Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present on the *property*?

Yes.

(6.) Are you aware of commonly known or reasonably ascertainable information about the *property* that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a.) Do you know the past uses of the *property*? If so, what were they?

No.

(b.) What, if any, specific chemicals are present or once were present at the *property*?

Unknown

---

[2] User, as defined in the ASTM Standard is "the party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The user has specific obligations for completing a successful application of this practice as outline in Section 6 [of the ASTM Standard]."

E 1527-21 USER QUESTIONNAIRE (cont.)
MILESTONE II PROPERTY

Questions 6 continued:

(c.) What, if any, spills, or other chemical releases have taken place at the *property*?

(d.) What, if any, environmental cleanups have taken place at the *property*?

(7.) As the *user* of this ESA, 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*?

COMPLETION:

I have completed this User Questionnaire to the best of my knowledge and provided all information to the environmental professional as of the following date:

Completed by: Ryan Hatheway

Date: June 20, 2022

Title: Director, Land Acquisition

Signature: Ryan Hatheway

Phone Number: 916-932-0970

Relationship to the Site (i.e., owner, lender, property manager): Buyer

APPENDIX C

Supporting Documents

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Sacramento County, California



June 16, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,510 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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 1:24,000.

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: Sacramento County, California
Survey Area Data: Version 20, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

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
213	San Joaquin silt loam, leveled, 0 to 1 percent slopes	0.6	6.0%
216	San Joaquin-Durixeralfs complex, 0 to 1 percent slopes	8.9	94.0%
Totals for Area of Interest		**9.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sacramento County, California

213—San Joaquin silt loam, leveled, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: hhpv
Elevation: 20 to 500 feet
Mean annual precipitation: 10 to 22 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

San joaquin and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Joaquin

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 23 inches: silt loam
H2 - 23 to 28 inches: clay loam
H3 - 28 to 54 inches: indurated
H4 - 54 to 60 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches; 28 to 54 inches to duripan
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Bruella

Percent of map unit: 3 percent
Hydric soil rating: No

Durixeralfs
Percent of map unit: 3 percent
Hydric soil rating: No

Xerarents
Percent of map unit: 2 percent
Hydric soil rating: No

Kimball
Percent of map unit: 2 percent
Hydric soil rating: No

Galt
Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Hedge
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed, rarely flooded
Percent of map unit: 1 percent
Hydric soil rating: No

216—San Joaquin-Durixeralfs complex, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: hhpy
Elevation: 20 to 500 feet
Mean annual precipitation: 10 to 22 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

San joaquin and similar soils: 55 percent
Durixeralfs and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Joaquin

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 23 inches: silt loam
H2 - 23 to 28 inches: clay loam
H3 - 28 to 54 inches: indurated
H4 - 54 to 60 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches; 28 to 54 inches to duripan
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Durixeralfs

Setting

Landform: Terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 6 inches: clay
H2 - 6 to 20 inches: clay loam
H3 - 20 to 60 inches: indurated

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 20 to 60 inches to duripan
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Kimball

Percent of map unit: 4 percent
Hydric soil rating: No

Galt

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Xerarents

Percent of map unit: 2 percent
Hydric soil rating: No

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Milestone II Property
Wyland Drive
Elk Grove, CA 95624

Inquiry Number: 7020313.3
June 15, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/15/22

Site Name:

Milestone II Property
Wyland Drive
Elk Grove, CA 95624
EDR Inquiry # 7020313.3

Client Name:

Wallace - Kuhl & Associates
3050 Industrial Boulevard
West Sacramento, CA 95691
Contact: Nancy Malaret

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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 # E6F8-4125-90EE

PO # NA

Project 4640.2200088.0000

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: E6F8-4125-90EE

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- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

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Milestone II Property
Wyland Drive
Elk Grove, CA 95624

Inquiry Number: 7020313.4
June 15, 2022

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

06/15/22

Site Name:

Milestone II Property
Wyland Drive
Elk Grove, CA 95624
EDR Inquiry # 7020313.4

Client Name:

Wallace - Kuhl & Associates
3050 Industrial Boulevard
West Sacramento, CA 95691
Contact: Nancy Malaret

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Search Results:

P.O.# NA
Project: 4640.2200088.0000

Coordinates:

Latitude: 38.398869 38° 23' 56" North
Longitude: -121.345528 -121° 20' 44" West
UTM Zone: Zone 10 North
UTM X Meters: 644472.57
UTM Y Meters: 4251367.69
Elevation: 52.00' above sea level

Maps Provided:

2018	1909, 1910
2015	1894
2012	
1979, 1980	
1975	
1968	
1947	
1941	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2018 Source Sheets



Elk Grove
2018
7.5-minute, 24000



Galt
2018
7.5-minute, 24000

2015 Source Sheets



Elk Grove
2015
7.5-minute, 24000



Galt
2015
7.5-minute, 24000

2012 Source Sheets



Elk Grove
2012
7.5-minute, 24000



Galt
2012
7.5-minute, 24000

1979, 1980 Source Sheets



Elk Grove
1979
7.5-minute, 24000
Aerial Photo Revised 1978



Galt
1980
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1975 Source Sheets



Galt
1975
7.5-minute, 24000
Aerial Photo Revised 1975



Elk Grove
1975
7.5-minute, 24000
Aerial Photo Revised 1975

1968 Source Sheets



Elk Grove
1968
7.5-minute, 24000
Aerial Photo Revised 1966



Galt
1968
7.5-minute, 24000
Aerial Photo Revised 1967

1947 Source Sheets



GALT
1947
15-minute, 50000

1941 Source Sheets



Franklin
1941
15-minute, 62500
Aerial Photo Revised 1939

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1909, 1910 Source Sheets



Elk Grove
1909
7.5-minute, 31680



Galt
1910
7.5-minute, 31680

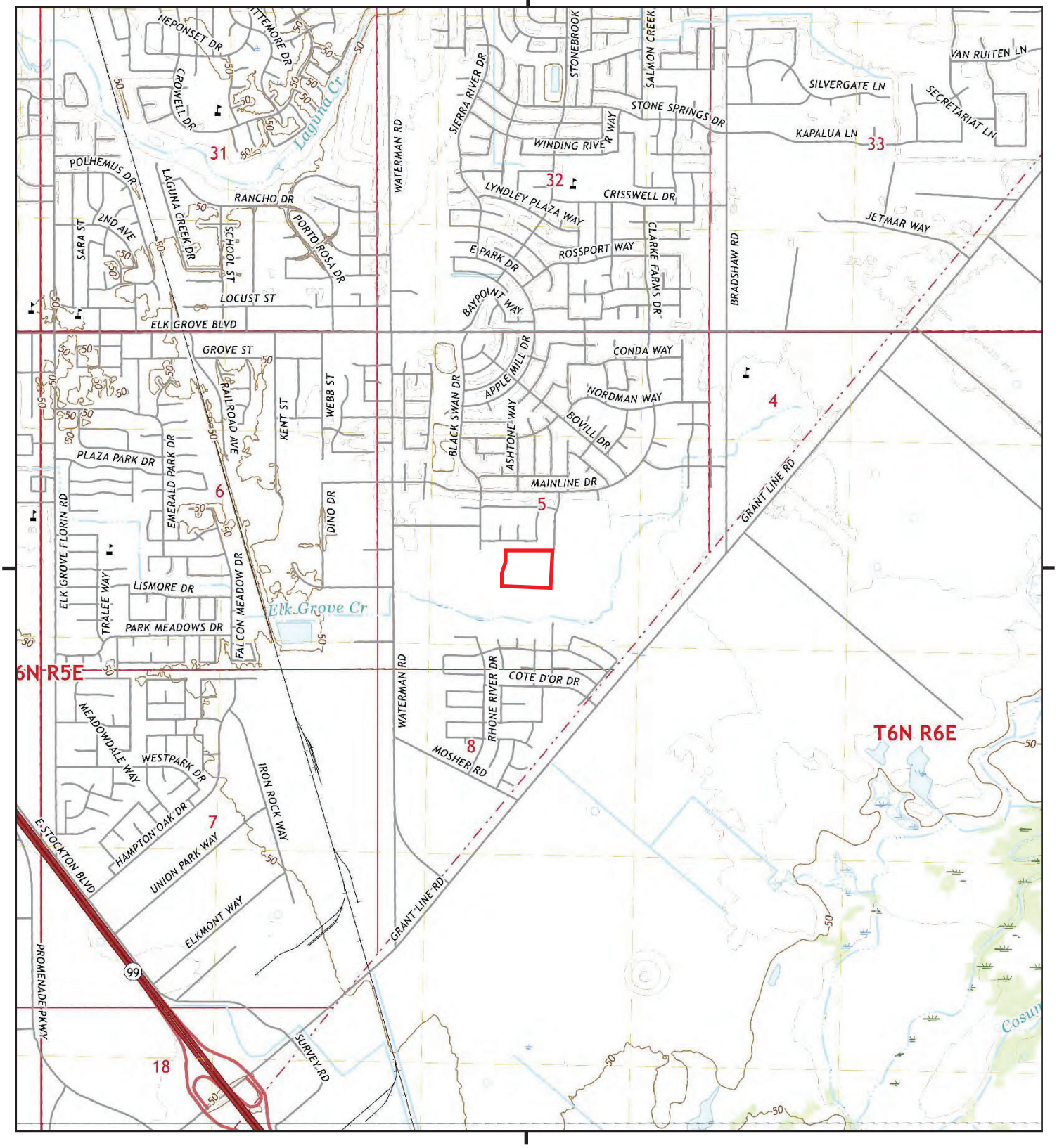
1894 Source Sheets



Lodi
1894
30-minute, 125000

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

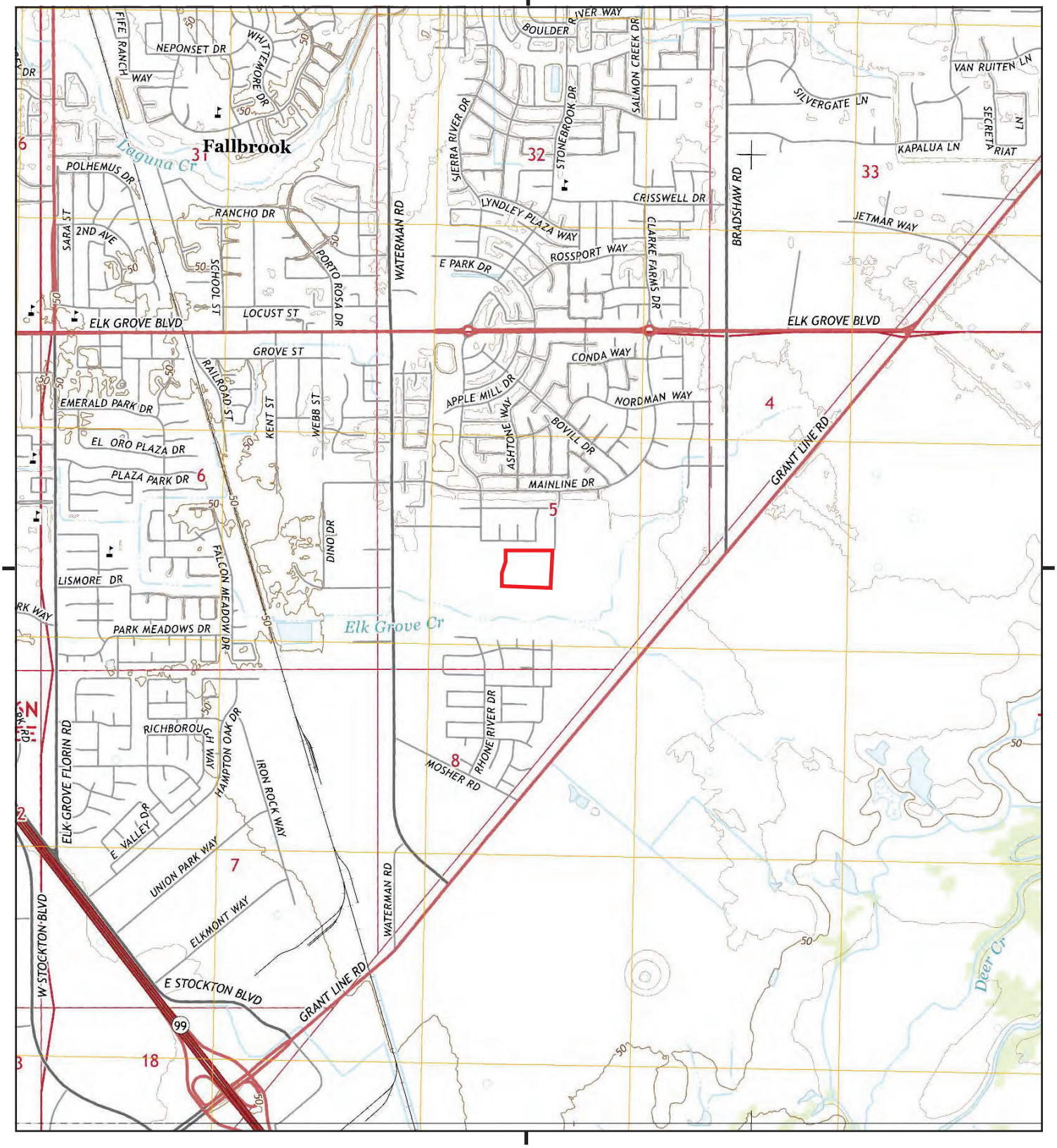
TP, Elk Grove, 2018, 7.5-minute
S, Galt, 2018, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

2015



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NW N NE
W E
SW S SE

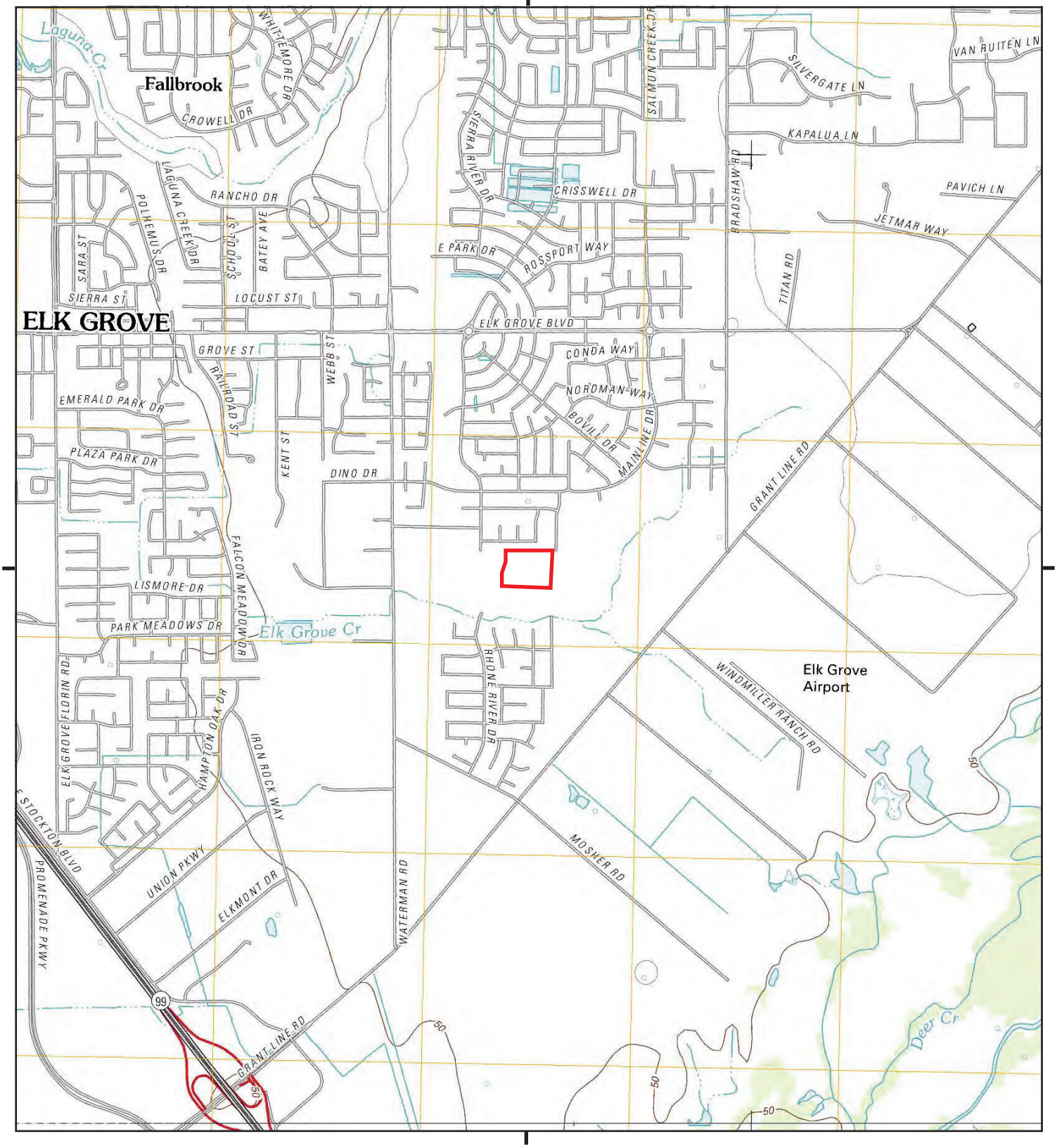
TP, Elk Grove, 2015, 7.5-minute
S, Galt, 2015, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

2012



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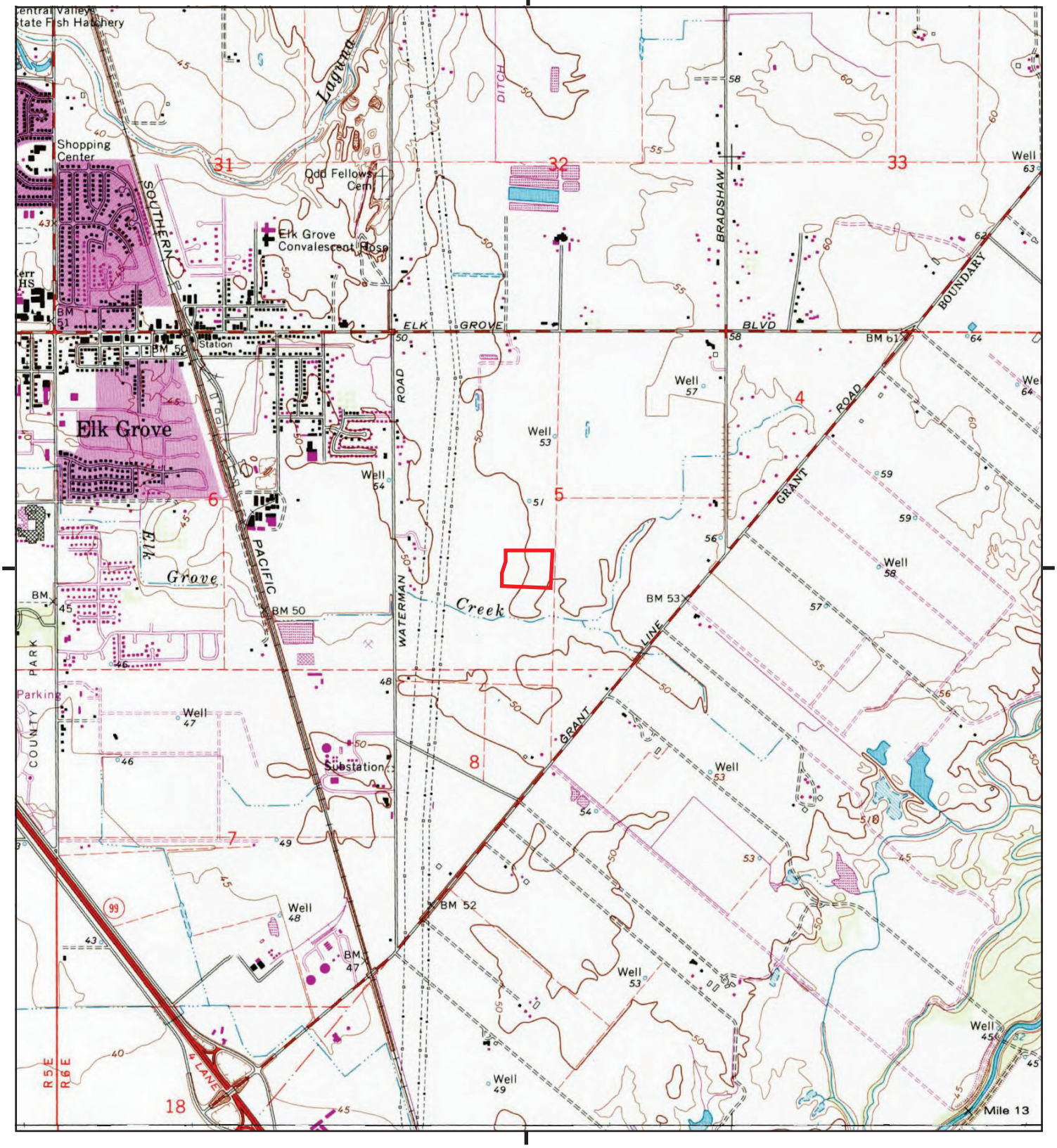
NW N NE
W E
SW S SE

TP, Elk Grove, 2012, 7.5-minute
S, Galt, 2012, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

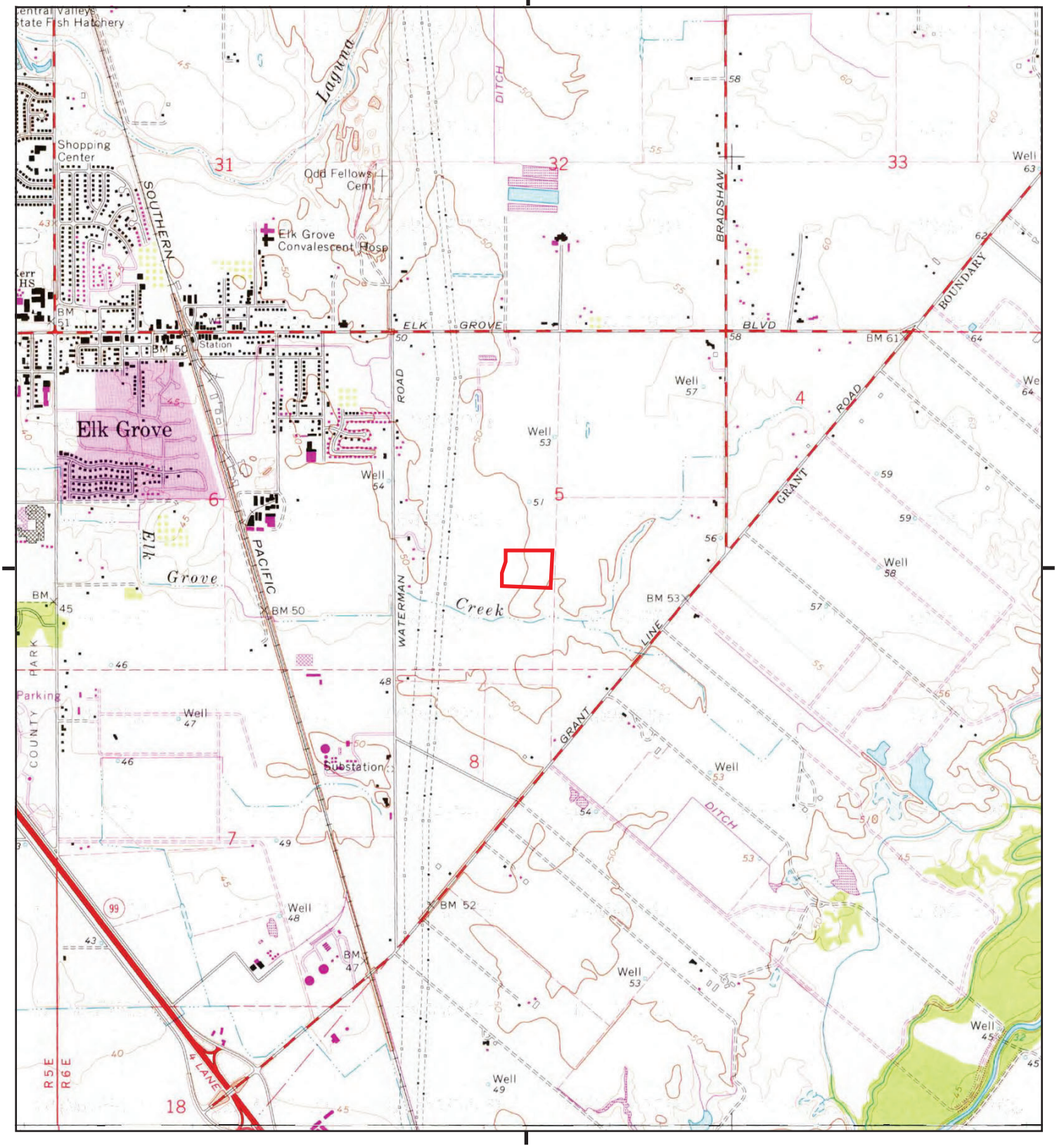
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elk Grove, 1979, 7.5-minute
S, Galt, 1980, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

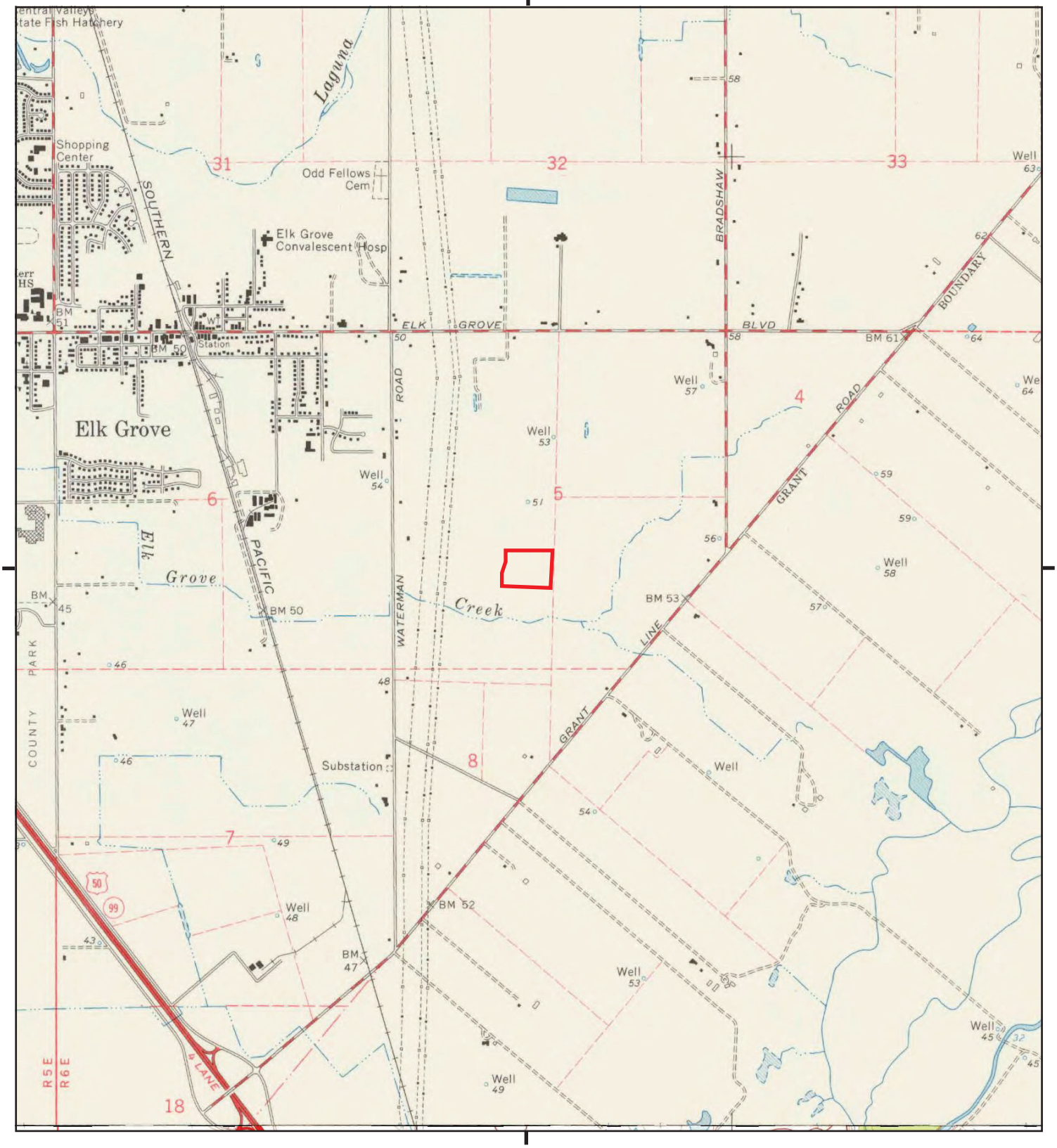
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elk Grove, 1975, 7.5-minute
S, Galt, 1975, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

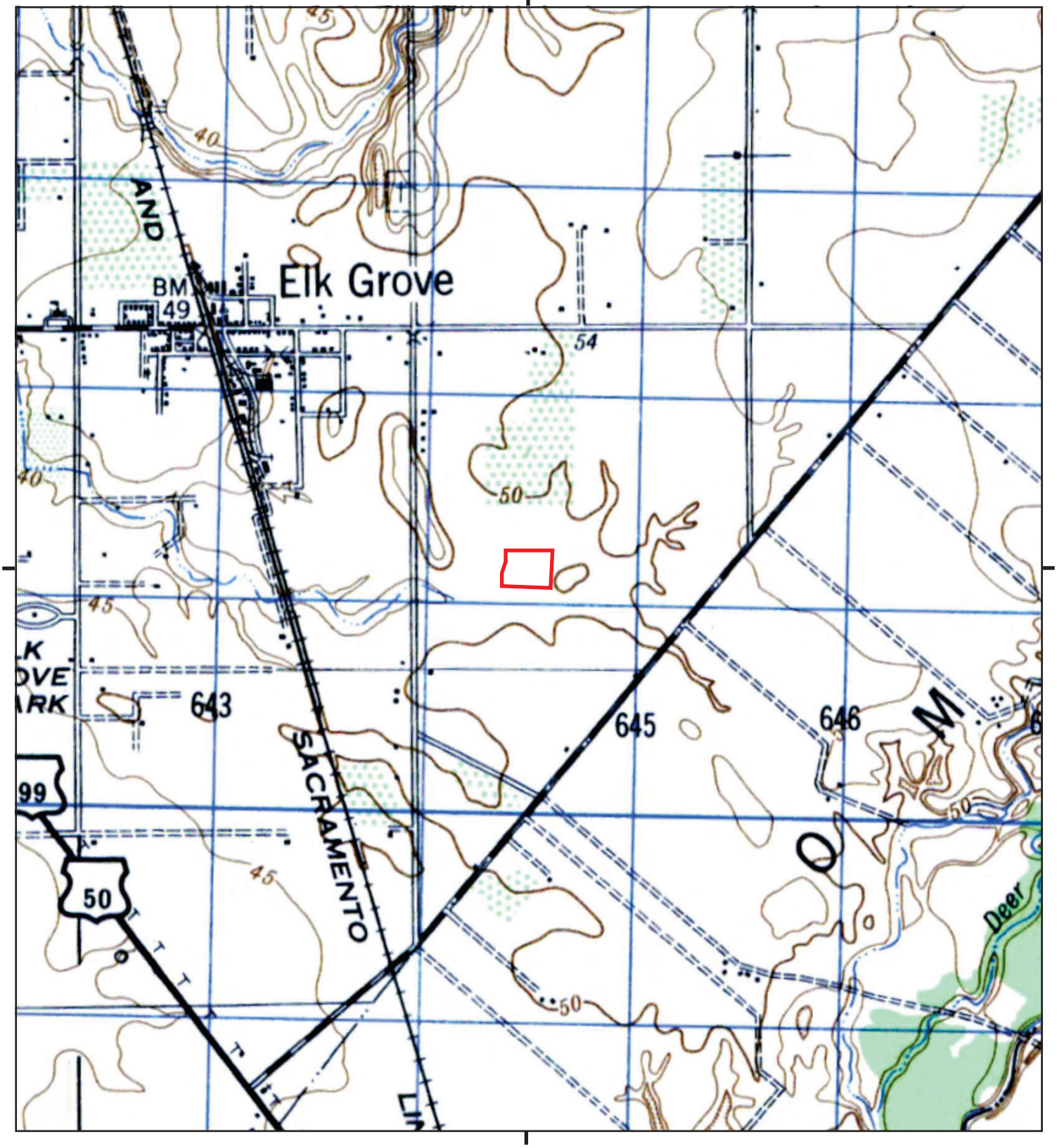
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elk Grove, 1968, 7.5-minute
S, Galt, 1968, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

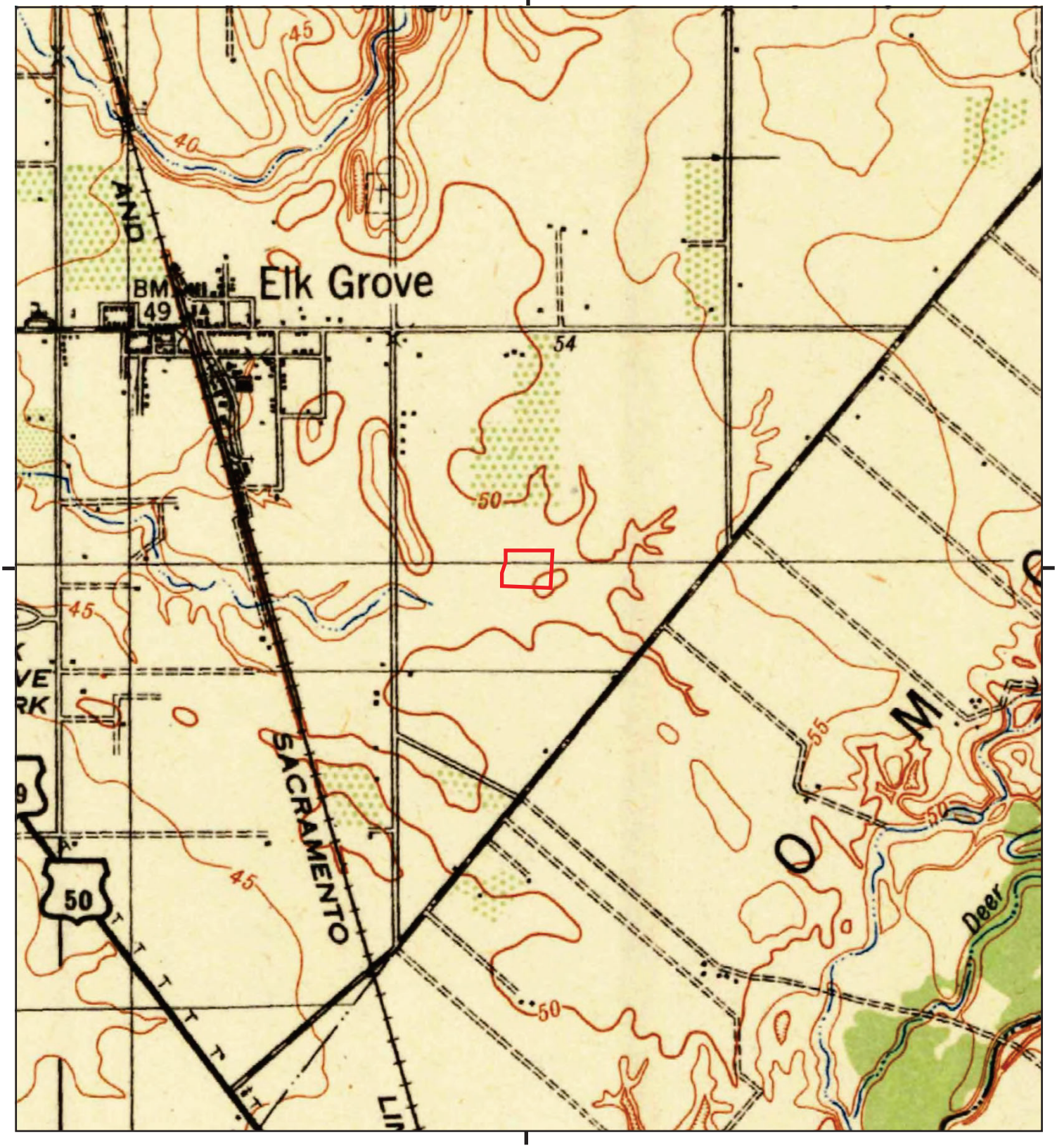
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, GALT, 1947, 15-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

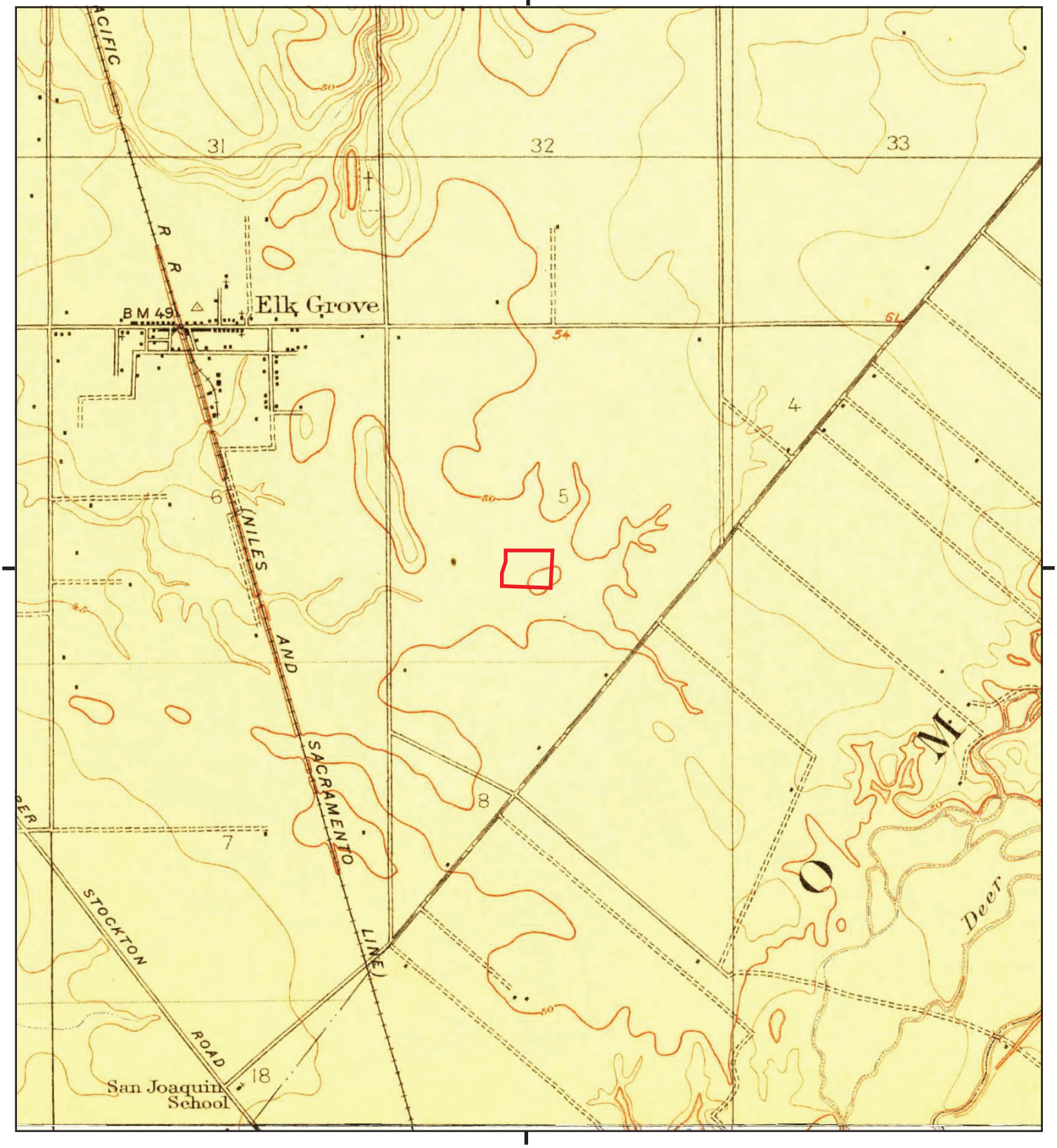
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Franklin, 1941, 15-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N



This report includes information from the following map sheet(s).

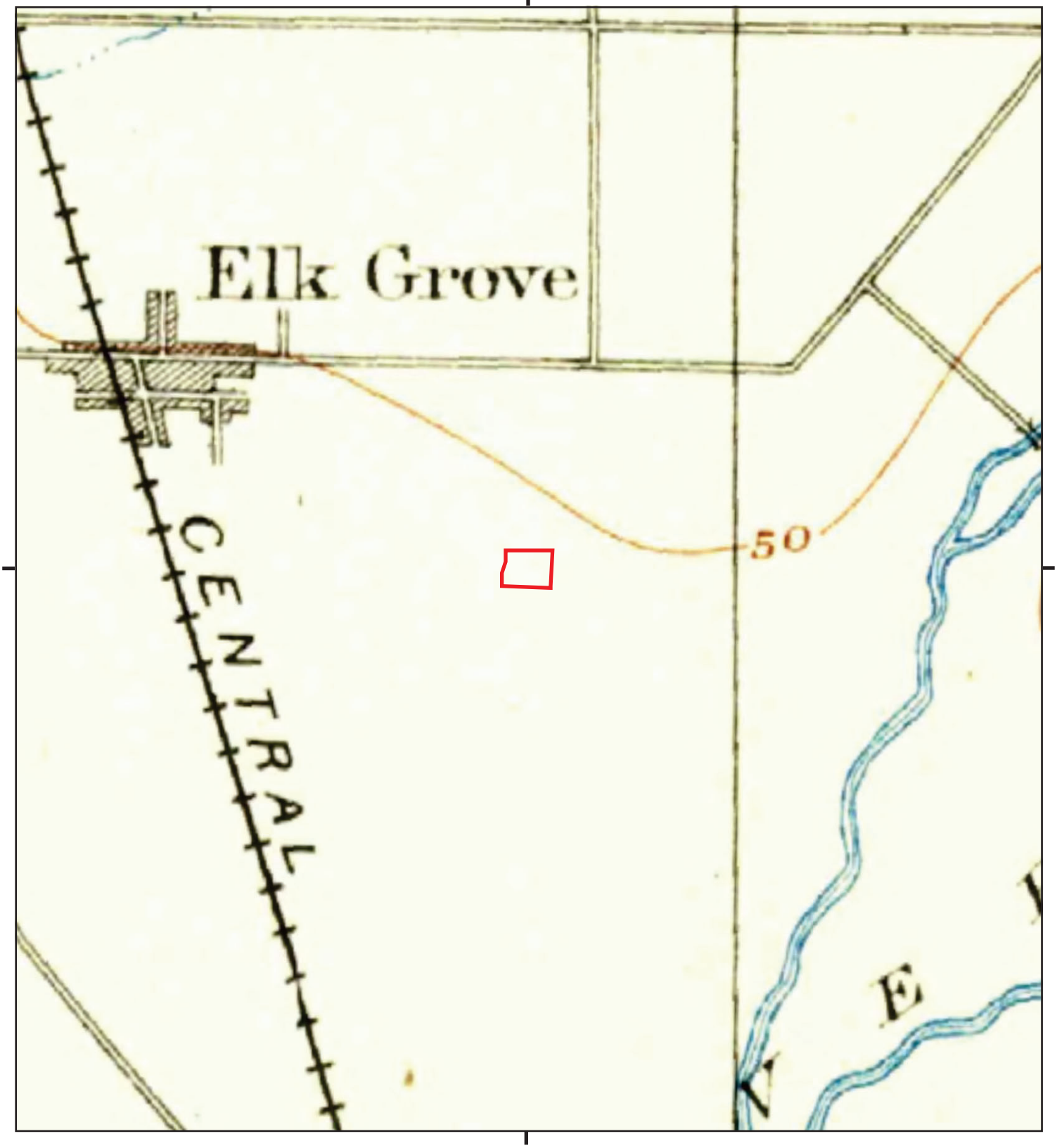
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elk Grove, 1909, 7.5-minute
S, Galt, 1910, 7.5-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & 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, Lodi, 1894, 30-minute

SITE NAME: Milestone II Property
ADDRESS: Wyland Drive
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Milestone II Property

Wyland Drive

Elk Grove, CA 95624

Inquiry Number: 7020313.8

June 15, 2022

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Shelton, CT 06484
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EDR Aerial Photo Decade Package

06/15/22

Site Name:

Milestone II Property
Wyland Drive
Elk Grove, CA 95624
EDR Inquiry # 7020313.8

Client Name:

Wallace - Kuhl & Associates
3050 Industrial Boulevard
West Sacramento, CA 95691
Contact: Nancy Malaret

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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
1998	1"=500'	Acquisition Date: January 01, 1998	USGS/DOQQ
1993	1"=500'	Acquisition Date: May 23, 1993	USGS/DOQQ
1984	1"=500'	Flight Date: June 08, 1984	USDA
1972	1"=500'	Flight Date: June 28, 1972	USDA
1966	1"=500'	Flight Date: August 05, 1966	USGS
1964	1"=500'	Flight Date: May 19, 1964	USDA
1957	1"=500'	Flight Date: September 09, 1957	USDA
1947	1"=500'	Flight Date: July 28, 1947	USGS
1937	1"=500'	Flight Date: August 17, 1937	USDA

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INQUIRY #: 7020313.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 7020313.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 7020313.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 7020313.8
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 7020313.8

YEAR: 1998

= 500'

N

EDR


INQUIRY #: 7020313.8
YEAR: 1993
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 7020313.8
YEAR: 1984
= 500'
N
EDR


INQUIRY #: 7020313.8
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 7020313.8
YEAR: 1966
= 500'
N
EDR



INQUIRY #: 7020313.8

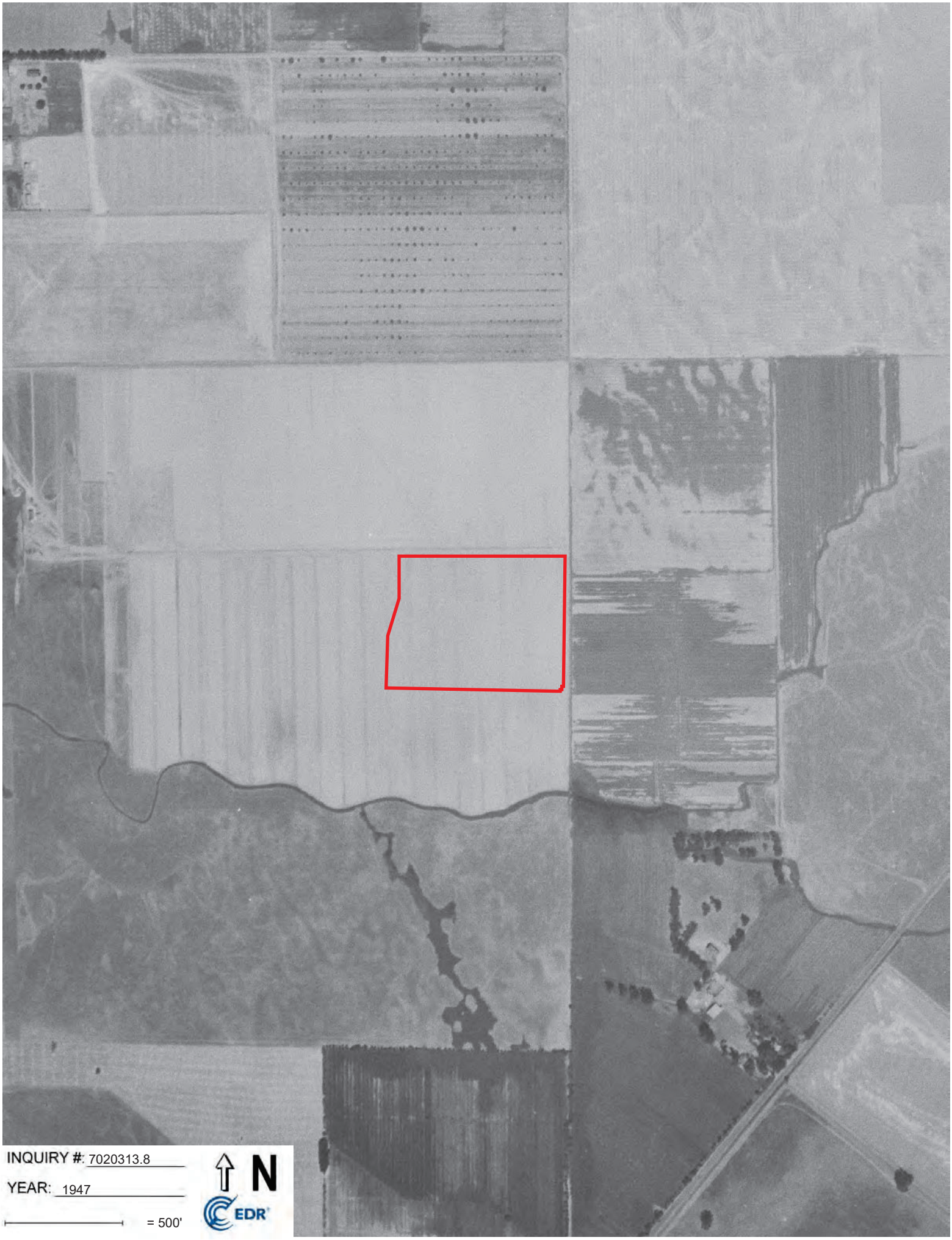
YEAR: 1964

= 500'

N

EDR


INQUIRY #: 7020313.8
YEAR: 1957
= 500'
N
EDR



INQUIRY #: 7020313.8

YEAR: 1947

= 500'

N

EDR


INQUIRY #: 7020313.8
YEAR: 1937
= 500'
N
EDR

Milestone II Property
Wyland Drive
Elk Grove, CA 95624

Inquiry Number: 7020313.5
June 21, 2022

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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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.

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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.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available 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.

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Data by
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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☐	☐	EDR Digital Archive
2000	☐	☐	EDR Digital Archive
1995	☐	☐	EDR Digital Archive
1992	☐	☐	EDR Digital Archive
1990	☐	☐	Haines Criss-Cross Directory
1986	☐	☐	Haines Criss-Cross Directory
1981	☐	☐	Haines Criss-Cross Directory
1977	☐	☐	Haines Criss-Cross Directory
1971	☐	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Wyland Drive
Elk Grove, CA 95624

Year	*CD Image*	*Source*	
WYLAND DR			
2017	pg A1	EDR Digital Archive	
2014	pg A2	EDR Digital Archive	
2010	pg A3	EDR Digital Archive	
2005	-	EDR Digital Archive	Street not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1990	-	Haines Criss-Cross Directory	Street not listed in Source
1986	-	Haines Criss-Cross Directory	Street not listed in Source
1981	-	Haines Criss-Cross Directory	Street not listed in Source
1977	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
WAYNE HEINTZ ST			
2017	-	EDR Digital Archive	Street not listed in Source
2014	-	EDR Digital Archive	Street not listed in Source
2010	-	EDR Digital Archive	Street not listed in Source
2005	-	EDR Digital Archive	Street not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1990	-	Haines Criss-Cross Directory	Street not listed in Source
1986	-	Haines Criss-Cross Directory	Street not listed in Source
1981	-	Haines Criss-Cross Directory	Street not listed in Source
1977	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WYLAND DR 2017

9820	NGUYEN, HUNG H
9828	CADEMARTI, STEPHEN
9836	ROGERS, STEPHEN R
9840	DAVIS, GERALDINE D
9844	LAKEMAN, ROBERT W
9848	KNOWLES, JEREMY S
9852	TRAN, DUC
9980	MITCHELL, MOORER L
9996	SOHAL, BHUPINDER K
10004	SAMORANO, ARTHUR C
10008	SANGHA, SATPAL K
10012	COLLINS, LES C
10016	TAEZA, GEORGE A
10020	SCRUGGS, LEE
10024	DEJAGER, DAVID M

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

WYLAND DR 2014

9820	NGUYEN, HUNG H
9824	OCCUPANT UNKNOWN,
9828	CADEMARTI, STEPHEN
9836	ROGERS, STEPHEN R
9840	MOORE, ANATOLE P
9844	LAKEMAN, ROBERT W
9848	LEVAN, BECKY N
9852	DUC, HUU T
9996	SOHAL, BHUPINDER K
10000	NGUYEN, ANTHONY
10004	SAMORANO, ARTHUR C
10008	SANGHA, SATPAL K
10012	COLLINS, LES C
10016	TAEZA, GEORGE A
10020	OCCUPANT UNKNOWN,
10024	DEJAGER, DAVID M

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

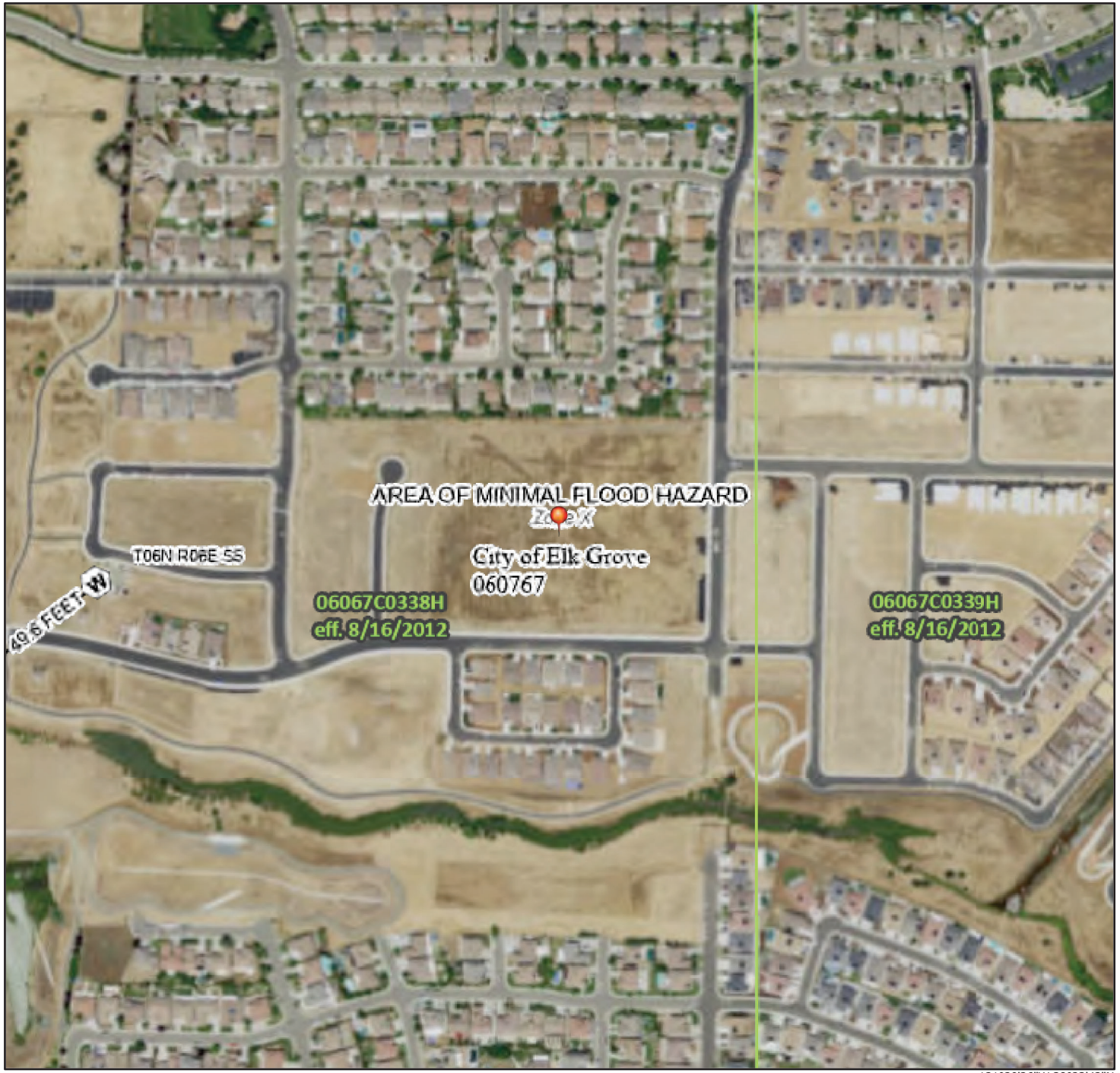
WYLAND DR 2010

9820	NGUYEN, PRENTICE
9824	ENCINA, JESUS U
9828	HOUGARD, ALISHA M
9832	OCCUPANT UNKNOWN,
9836	HOANG, VIVIAN
9840	MOORE, ANATOLE P
9844	LAKEMAN, ROBERT W
9848	DEGREGORIO ELECTRIC
	GREGORY, CHRISTOPHER B
9852	TRINH, DUNG B
9980	MITCHELL, SHELTON L
9984	GALANG, FRED
9996	SOHAL, BHUPINDER K
10000	LEMY, NGOC
10004	SAMORANO, ARTHUR C
10008	OCCUPANT UNKNOWN,
10012	NGUYEN, MAI T
10016	OHANA ENTERPRISES
	TAEZA, GEORGE A
10020	SCRUGGS, THOMAS D
10024	PHAN, KIM

National Flood Hazard Layer FIRMette

FEMA

121°21'3"W 38°24'10"N



121°20'26"W 38°23'42"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/16/2022 at 2:39 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Environmental Lien Search Report
E L S

Security First Title Resource
Residential - Commercial - Environmental

Celebrating 35 Years In Business

Prepared For
Wallace – Kuhl & Associates
3050 Industrial Boulevard, West Sacramento, CA 95691

Project Name
Milestone II Property

June 27, 2022

Security First Title Resource
Residential - Commercial - Environmental

West Palm Beach, FL - Minneapolis, MN
Tel.: (866) 288-0829 - Fax (866) 343-2388
Info@SecurityFirstTitleResource.net - www.securityfirsttitleresource.net

The Environmental Lien Search Report (ELS) provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering control and institutional controls.
Our in house professional abstractors / title examiners, following established procedure, use client supplied property data, such as property address, map, parcel number etc. to search for:

- parcel information and / or legal description
- search for ownership information
- research official recorded land title documents
- provide 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).

As per ASTM-21 Standard the records were searched back to January 1, 1980 for environmental liens, activity and use limitations.
A copy of the current vesting deed is attached hereto and made a part hereof.

Below is the property data information and Environmental Lien Search report of the subject property for a period ending June 10, 2022.

CLIENT PROJECT NO.: 4640.2200088.0000 REPORT DATE: June 27, 2022

SUBJECT PROPERTY: Milestone II Property

COUNTY / JURISDICTION: Sacramento, California

PROPERTY IDENTIFIER: 134-0110-177-0000

CURRENT OWNER INFORMATION

Type of Deed:	Grant Deed
Title Vested in:	Johan Otto, Trustee of the Johan and Anne Otto Trust, dated April 28, 2005 and Raymond A. Melavic, Trustee of the surviving spouse's trust , Raymond and Gloria Melavic Family Trust established 2-17-1999
Deed dated:	4-27-2018
Deed Recorded:	4-27-2018
Instrument #	201804270880
Note:	Substitution of trustee and full reconveyance recorded 10-27-2021 document # 202110271629

LEGAL DESCRIPTION: See deed attached hereto and made a part hereof.

Disclaimer

This report is neither a guarantee of title, a commitment to insure, nor a policy of title insurance. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE WHAT SOEVER IN CONNECTION WITH THIS REPORT. Security First Title Resource, specifically disclaims the making of any such warranties, including without limitation, merchantability or fitness for a particular use or purpose. The information contained in this report is retrieved as it is recorded from the various agencies that make it available. Therefore, the company's liability to this report extends only to the fee charged thereof. Copyright 1987 -2022 by Security First Title Resource. All Rights Reserved. Reproduction in any media or format, in whole or in part, of any report, or its affiliates, is prohibited without prior written permission.

Environmental Lien Search

ENVIRONMENTAL LIEN

Environmental Lien: ☐ Found ☒ Not Found

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Instrument:

Comments:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: ☐ Found ☒ Not Found

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Instrument:

Comments:

RECORDING REQUESTED BY

Placer Title Company
Escrow Number: P-212718

AND WHEN RECORDED MAIL TO

Johan Otto
c/o 1722 3rd Street, Suite 202
Sacramento, CA 95814

Sacramento County
Donna Allred, Clerk/Recorder

Doc # 201804270880

4/27/2018 2:15:29 PM

RJD
Titles 1
Pages 6

Fees	$110.00
Taxes	$0.00
PCOR	$0.00
Paid	$110.00

A.P.N.: portion of APN 134-0110-073 and portion of APN 134-0110-064 and portion of APN 134-0110-065

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

(Resultant Parcels 1 and 2)

The undersigned grantor(s) declare(s): R&T Code 11911 – no consideration
Documentary transfer tax is $0.00 City Transfer Tax: $0.00
( ) Unincorporated Area (X) City of Elk Grove
(___) computed on full value of property conveyed, or
(___) computed on full value less value of liens and encumbrances remaining at time of sale.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Johan Otto, Trustee of the Johan and Anne Otto Trust, dated April 28, 2005 and Raymond A. Melavic, Trustee of the Surviving Spouse's Trust, Raymond and Gloria Melavic Family Trust established February 17, 1999**

Hereby GRANT(S) to **Johan Otto, Trustee of the Johan and Anne Otto Trust, dated April 28, 2005 and Raymond A. Melavic, Trustee of the Surviving Spouse's Trust, Raymond and Gloria Melavic Family Trust established February 17, 1999**

The land described herein is situated in the State of California, County of Sacramento, City of Elk Grove, described as follows:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF FOR FULL LEGAL DESCRIPTION

This deed is being recorded to conform the legal description herein to that certain "(Lot Line Adjustment) Certificate of Compliance" recorded April 27, 2018 as Document No. Book 20180427 page 0876, Official Records of Sacramento County.

Dated: April 10, 2018

Johan Otto, Trustee of the Johan and Anne Otto Trust, dated April 28, 2005

Raymond A. Melavic, Trustee of the Surviving Spouse's Trust, Raymond and Gloria Melavic Family Trust established February 17, 1999

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE

SAME AS ABOVE

Name Street Address City & State

CA – Correction Deed

CALIFORNIA ALL PURPOSE ACKNOWLEDGMENT

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)

)ss.

County of Sacramento)

On April 26, 2018 before me, Jenny Vega, Notary Public, personally appeared Raymond A. Melavic and Johan Otto, 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)

JENNY VEGA
Comm. #2229238
Notary Public · California
Sacramento County
Comm. Expires Feb 20, 2022

Exhibit "A"

Resultant Parcel 1 Legal Description

The land described herein is situated in the State of California, County of Sacramento, City of Elk Grove, described as follows:

PARCEL 1:

ALL OF PARCEL B, AS SHOWN ON THE PARCEL MAP FILED IN THE OFFICE OF THE COUNTY RECORDER OF SACRAMENTO COUNTY, IN BOOK 61 OF PARCEL MAPS, PAGE 16, RECORDS OF SACRAMENTO COUNTY TOGETHER WITH THOSE PORTIONS OF PARCEL 2 AS SHOWN ON THE PARCEL MAP FILED IN BOOK 21 PAGE 51 OF PARCEL MAPS RECORDS OF SAID COUNTY DESCRIBED AS FOLLOWS:

TRANSFER AREA B –

BEGINNING AT THE NORTHWEST CORNER OF PARCEL B AS DESCRIBED IN THE DEED RECORDED IN BOOK 19820903 PAGE 260, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTH LINE OF SAID PARCEL B NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 554.67 FEET; THENCE NORTH 0 DEGREES 19 MINUTES 09 SECONDS EAST 27.00 FEET; THENCE NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 95.68 FEET; THENCE LEAVING SAID NORTH LINE SOUTH 3 DEGREES 43 MINUTES 02 SECONDS WEST 415.35 FEET TO THE NORTH LINE OF PARCEL A ; THENCE ALONG THE NORTH LINE OF SAID PARCEL A AS DESCRIBED IN THE ABOVE MENTIONED DEED SOUTH 89 DEGREES 17 MINUTES 10 SECONDS WEST 618.74 FEET; THENCE LEAVING SAID NORTH LINE OF SAID PARCEL A ALONG THE WEST LINE OF SAID PARCEL B NORTH 0 DEGREES 42 MINUTES 50 SECONDS WEST 389.97 FEET TO THE POINT OF BEGINNING.

TRANSFER AREA C -

BEGINNING AT THE NORTHWEST CORNER OF PARCEL A AS DESCRIBED IN THE DEED RECORDED IN BOOK 19820903 PAGE 260, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTH LINE OF SAID PARCEL A NORTH 89 DEGREES 17 MINUTES 10 SECONDS EAST 618.74 FEET; THENCE LEAVING SAID NORTH LINE SOUTH 3 DEGREES 43 MINUTES 2 SECONDS WEST 402.87 FEET TO THE SOUTH LINE OF SAID PARCEL; THENCE ALONG THE SOUTH LINE OF SAID PARCEL A NORTH 77 DEGREES 34 MINUTES 50 SECONDS WEST 9.36 FEET; THENCE CONTINUING ALONG THE SOUTH LINE OF SAID PARCEL A THE FOLLOWING COURSES; NORTH 82 DEGREES 50 MINUTES 50 SECONDS WEST 202.00 FEET; THENCE NORTH 57 DEGREES 51 MINUTES 50 SECONDS WEST 268.00 FEET; THENCE SOUTH 89 DEGREES 02 MINUTES 10 SECONDS EAST 52.00 FEET; THENCE SOUTH 82 DEGREES 53 MINUTES 6 SECONDS WEST 101.89 FEET TO THE WEST LINE OF SAID PARCEL; THENCE ALONG THE WEST LINE OF SAID PARCEL A NORTH 0 DEGREES 42 MINUTES 50 SECONDS WEST 238.10 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION OF SAID PARCEL B AS SHOWN ON SAID PARCEL MAP DESCRIBED AS FOLLOWS:

TRANSFER AREA A -

BEGINNING AT THE NORTHEAST CORNER OF SAID PARCEL B, THENCE ALONG THE EAST LINE OF SAID PARCEL B SOUTH 0 DEGREES 40 MINUTES 10 SECONDS WEST 370.00 FEET; THENCE ALONG THE SOUTH LINE OF PARCEL B SOUTH 89 DEGREES 32 MINUTES 15 SECONDS WEST 724.35 FEET; THENCE LEAVING

SAID SOUTH LINE NORTH 3 DEGREES 43 MINUTES 02 SECONDS EAST 370.91 FEET TO A POINT ON THE NORTH LINE OF SAID PARCEL B; THENCE ALONG THE NORTH LINE OF SAID PARCEL B NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 704.63 FEET TO THE POINT OF BEGINNING.



Exhibit "A"

Resultant Parcel 2 Legal Description

The land described herein is situated in the State of California, County of Sacramento, City of Elk Grove, described as follows:

PARCEL 2:

ALL OF PARCEL 2, AS SHOWN ON THE PARCEL MAP FILED IN THE OFFICE OF THE COUNTY RECORDER OF SACRAMENTO COUNTY, IN BOOK 21 OF PARCEL MAPS, PAGE 51 TOGETHER WITH THE FOLLOWING AREAS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRANSFER AREA A –

A PORTION OF PARCEL B, AS SHOWN ON THE PARCEL MAP FILED IN THE OFFICE OF THE COUNTY RECORDER OF SACRAMENTO COUNTY, IN BOOK 61 OF PARCEL MAPS, PAGE 16, RECORDS OF SAID COUNTY MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID PARCEL B, THENCE ALONG THE EAST LINE OF SAID PARCEL B SOUTH 0 DEGREES 40 MINUTES 10 SECONDS WEST 370.00 FEET; THENCE ALONG THE SOUTH LINE OF PARCEL B SOUTH 89 DEGREES 32 MINUTES 15 SECONDS WEST 724.35 FEET; THENCE LEAVING SAID SOUTH LINE NORTH 3 DEGREES 43 MINUTES 02 SECONDS EAST 370.91 FEET TO A POINT ON THE NORTH LINE OF SAID PARCEL B; THENCE ALONG THE NORTH LINE OF SAID PARCEL B NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 704.63 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THE FOLLOWING PORTIONS OF SAID PARCEL 2 AS SHOWN ON SAID PARCEL MAP DESCRIBED AS FOLLOWS:

TRANSFER AREA B –

A PORTION OF PARCEL 2 AS SHOWN ON THE PARCEL MAP FILED IN BOOK 21 PAGE 51 OF PARCEL MAPS IN THE OFFICE OF THE COUNTY RECORDER OF SACRAMENTO COUNTY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF PARCEL B AS DESCRIBED IN THE DEED RECORDED IN BOOK 19820903 PAGE 260, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTH LINE OF SAID PARCEL B NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 554.67 FEET; THENCE NORTH 0 DEGREES 19 MINUTES 09 SECONDS EAST 27.00 FEET; THENCE NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 95.68 FEET; THENCE LEAVING SAID NORTH LINE SOUTH 3 DEGREES 43 MINUTES 02 SECONDS WEST 415.35 FEET TO THE NORTH LINE OF PARCEL A ; THENCE ALONG THE NORTH LINE OF SAID PARCEL A AS DESCRIBED IN THE ABOVE MENTIONED DEED SOUTH 89 DEGREES 17 MINUTES 10 SECONDS WEST 618.74 FEET; THENCE LEAVING SAID NORTH LINE OF SAID PARCEL A ALONG THE WEST LINE OF SAID PARCEL B NORTH 0 DEGREES 42 MINUTES 50 SECONDS WEST 389.97 FEET TO THE POINT OF BEGINNING.

TRANSFER AREA C -

A PORTION OF PARCEL 2 AS SHOWN ON THE PARCEL MAP FILED IN BOOK 21 PAGE 51 OF PARCEL MAPS, RECORDS OF SACRAMENTO COUNTY MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF PARCEL A AS DESCRIBED IN THE DEED RECORDED IN BOOK 19820903 PAGE 260, OFFICIAL RECORDS OF SAID COUNTY; THENCE ALONG THE NORTH LINE OF SAID PARCEL A NORTH 89 DEGREES 17 MINUTES 10 SECONDS EAST 618.74 FEET; THENCE LEAVING SAID NORTH LINE SOUTH 3 DEGREES 43 MINUTES 2 SECONDS WEST 402.87 FEET TO THE SOUTH LINE OF SAID PARCEL; THENCE ALONG THE SOUTH LINE OF SAID PARCEL A NORTH 77 DEGREES 34 MINUTES 50 SECONDS WEST 9.36 FEET; THENCE CONTINUING ALONG THE SOUTH LINE OF SAID PARCEL A THE FOLLOWING COURSES; NORTH 82 DEGREES 50 MINUTES 50 SECONDS WEST 202.00 FEET; THENCE NORTH 57 DEGREES 51 MINUTES 50 SECONDS WEST 268.00 FEET; THENCE SOUTH 89 DEGREES 02 MINUTES 10 SECONDS EAST 52.00 FEET; THENCE SOUTH 82 DEGREES 53 MINUTES 6 SECONDS WEST 101.89 FEET TO THE WEST LINE OF SAID PARCEL; THENCE ALONG THE WEST LINE OF SAID PARCEL A NORTH 0 DEGREES 42 MINUTES 50 SECONDS WEST 238.10 FEET TO THE POINT OF BEGINNING.

RESULTANT PARCEL 3 -

A PORTION OF PARCEL 2 AS SHOWN ON THE PARCEL MAP FILED IN BOOK 21 PAGE 51 OF PARCEL MAPS RECORDS OF SACRAMENTO COUNTY AS DESCRIBED AS PARCEL B IN THE DEED RECORDED IN BOOK 19820903 PAGE 260, OFFICIAL RECORDS OF SAID COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID PARCEL 2 OF SAID PARCEL MAP, THENCE ALONG THE EAST LINE OF SAID PARCEL 2 SOUTH 00 DEGREES 40 MINUTES 10 SECONDS WEST 596.01 FEET; THENCE LEAVING SAID EAST LINE NORTH 89 DEGREES 05 MINUTES 21 SECONDS WEST 791.61 FEET; THENCE NORTH 00 DEGREES 50 MINUTES 01 SECONDS EAST 229.30 FEET; THENCE NORTH 15 DEGREES 43 MINUTES 57 SECONDS EAST 171.58 FEET; THENCE NORTH 00 DEGREES 27 MINUTES 45 SECONDS WEST 182.91 FEET TO A POINT ON THE NORTH LINE OF SAID PARCEL 2; THENCE ALONG SAID NORTH LINE OF SAID PARCEL 2 NORTH 89 DEGREES 32 MINUTES 15 SECONDS EAST 750.11 FEET TO THE TRUE POINT OF BEGINNING.



RECORDING REQUESTED BY:
Fidelity National Title Company

Escrow Order No.: FSSE-8042104719

When Recorded Mail Document To:

Johan Otto, Trustee and Raymond A. Melavic, Trustee
1722 3rd Street
Sacramento, CA 95811

Sacramento County
Donna Allred, Clerk/Recorder

Doc #	**202110271629**	Fees	$31.00
10/27/2021	2:32:33 PM	Taxes	$0.00
BML	Electronic	PCOR	$0.00
Titles	2	Paid	$31.00
Pages	2		

APN/Parcel ID(s): 134-0110-193-000

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Exempt from fee per GC 27388.1 (a) (2); recorded in connection with a transfer subject to the imposition of documentary transfer tax.

SUBSTITUTION OF TRUSTEE AND FULL RECONVEYANCE

WHEREAS, Johan Otto, Trustee of the Johan and Anna Otto Trust dated April 28, 2005 and Raymond A. Melavic, Trustee of the Surviving Spouse's Trust, Raymond and Gloria Melavic Family Trust established February 17, 1999 was the original Trustor,

First American Title Company, a corporation the original Trustee, and

Taylor Morrison of California, LLC, a California limited liabilty company the Beneficiary,

under that certain Deed of Trust dated October 11, 2017 and recorded on October 13, 2017 as Doc No. 201710130371, Sacramento County Recorder, Official Records of the County of Sacramento, State of California, and

WHEREAS, the undersigned Beneficiary desires to substitute a new Trustee under said Deed of Trust in place and instead of First American Title Company, a corporation

now therefore, the undersigned hereby substitutes

Taylor Morrison of California, LLC, a California limited liabilty company
as Trustee

under said Deed of Trust and

Taylor Morrison of California, LLC, a California limited liabilty company
as the substituted Trustee

does hereby reconvey, without warranty, to the person or persons legally entitled thereto, the Estate now held thereunder.

Signature Page attached

SUBSTITUTION OF TRUSTEE AND FULL RECONVEYANCE
(continued)

APN/Parcel ID(s): 134-0110-193-000

Dated: October 18, 2021

BENEFICIARY/SUBSTITUTED TRUSTEE:

Taylor Morrison of California, LLC, a California limited liability company

Signature

By: Jay Pawlek
Print Name

Its: Vice President
Print Title

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 Sacramento

On October 18, 2021 before me, L. Hall, Notary Public,
(here insert name and title of the officer)

personally appeared Jay Pawlek,
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

L. HALL
Notary Public - California
Sacramento County
Commission # 2249285
My Comm. Expires Aug 5, 2022

APPENDIX D

EDR® Radius Map Report with Geocheck

Milestone II Property
Wyland Drive
Elk Grove, CA 95624

Inquiry Number: 7020313.2s
June 15, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (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

WYLAND DRIVE
ELK GROVE, CA 95624

COORDINATES

Latitude (North):	38.3988690 - 38ˆ 23' 55.92''
Longitude (West):	121.3455280 - 121ˆ 20' 43.90''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	644476.2
UTM Y (Meters):	4251161.0
Elevation:	52 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	12021595 ELK GROVE, CA
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140621
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
WYLAND DRIVE
ELK GROVE, CA 95624

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	SACRAMENTO COUNTY WA	9372 MAINLINE DR	HAZNET, HWTS	Lower	1154, 0.219, NW
A2	RESIDENCE	9800 WATERMAN	RGA LUST	Higher	2099, 0.398, WNW
A3	RESIDENCE	9800 WATERMAN	LUST, Sacramento Co. CS, Cortese, Notify 65, CERS	Higher	2099, 0.398, WNW
B4	KINGSFORD PRODUCTS C	10000 WATERMAN ROAD	RGA LUST	Lower	2302, 0.436, SW
B5	KINGSFORD PROD CO	10000 WATERMAN	LUST, Cortese, EMI, HIST CORTESE, Sacramento Co....	Lower	2302, 0.436, SW
B6	KINGSFORD PROD CO	10000 WATERMAN RD	RGA LUST	Lower	2302, 0.436, SW
B7	KINGSFORD PROD CO (C	10000 WATERMAN RD	RGA LUST	Lower	2302, 0.436, SW
8	ELK GROVE MONTESSORI	BRADSHAW ROAD AND EL	ENVIROSTOR, SCH, CERS	Higher	4384, 0.830, NE
9	ELK GROVE EXPANSION	BRANSHAW ROAD AND EL	ENVIROSTOR, SCH	Higher	4462, 0.845, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS Engineering Controls Sites List
US INST CONTROLS Institutional Controls Sites List

Federal ERNS list

ERNS Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE State Response Sites

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF Solid Waste Information System

Lists of state and tribal leaking storage tanks

INDIAN LUST Leaking Underground Storage Tanks on Indian Land
CPS-SLIC Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST Underground Storage Tank Listing
UST Active UST Facilities
AST Aboveground Petroleum Storage Tank Facilities
INDIAN UST Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

VCP Voluntary Cleanup Program Properties
INDIAN VCP Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT Waste Management Unit Database
SWRCY Recycler Database
HAULERS Registered Waste Tire Haulers Listing
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
ODI Open Dump Inventory
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL Delisted National Clandestine Laboratory Register

HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
CDL ---- Clandestine Drug Labs
CERS HAZ WASTE ---- CERS HAZ WASTE
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register
PFAS ---- PFAS Contamination Site Location Listing
AQUEOUS FOAM ---- Former Fire Training Facility Assessments Listing

Local Lists of Registered Storage Tanks

SWEEPS UST ---- SWEEPS UST Listing
HIST UST ---- Hazardous Substance Storage Container Database
CA FID UST ---- Facility Inventory Database
CERS TANKS ---- California Environmental Reporting System (CERS) Tanks

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
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
UXO ---- Unexploded Ordnance Sites
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---- Bond Expenditure Plan
CUPA Listings ---- CUPA Resources List
DRYCLEANERS ---- Cleaner Facilities
EMI ---- Emissions Inventory Data
ENF ---- Enforcement Action Listing
Financial Assurance ---- Financial Assurance Information Listing
ICE ---- ICE
HWP ---- EnviroStor Permitted Facilities Listing
HWT ---- Registered Hazardous Waste Transporter Database
MINES ---- Mines Site Location Listing
Sacramento Co. ML ---- Master Hazardous Materials Facility List
MWMP ---- Medical Waste Management Program Listing
NPDES ---- NPDES Permits Listing
PEST LIC ---- Pesticide Regulation Licenses Listing
PROC ---- Certified Processors Database
UIC ---- UIC Listing
UIC GEO ---- UIC GEO (GEOTRACKER)
WASTEWATER PITS ---- Oil Wastewater Pits Listing
WDS ---- Waste Discharge System
WIP ---- Well Investigation Program Case List
MILITARY PRIV SITES ---- MILITARY PRIV SITES (GEOTRACKER)
PROJECT ---- PROJECT (GEOTRACKER)
WDR ---- Waste Discharge Requirements Listing
CIWQS ---- California Integrated Water Quality System
CERS ---- CERS
NON-CASE INFO ---- NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS ---- OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS ---- PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT ---- SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ ---- Well Stimulation Project (GEOTRACKER)
MINES MRDS ---- Mineral Resources Data System
HWTS ---- Hazardous Waste Tracking System

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

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/24/2022 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ELK GROVE MONTESSORI Facility Id: 60001032 Status: No Action Required	***BRADSHAW ROAD AND EL***	***NE 1/2 - 1 (0.830 mi.)***	***8***	***22***
ELK GROVE EXPANSION Facility Id: 60001825 Status: No Action Required	***BRANSHAW ROAD AND EL***	***NE 1/2 - 1 (0.845 mi.)***	***9***	***24***

Lists of state and tribal leaking storage tanks

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 are 2 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***9800 WATERMAN***	***WNW 1/4 - 1/2 (0.398 mi.)***	***A3***	***11***
Database: LUST REG 5, Date of Government Version: 07/01/2008				
Database: LUST, Date of Government Version: 05/23/2022				
Status: Completed - Case Closed				
Status: Case Closed				
Global Id: T0606791922				

Lower Elevation	Address	Direction / Distance	Map ID	Page
KINGSFORD PROD CO	***10000 WATERMAN***	***SW 1/4 - 1/2 (0.436 mi.)***	***B5***	***14***
Database: LUST REG 5, Date of Government Version: 07/01/2008				
Database: LUST, Date of Government Version: 05/23/2022				
Status: Completed - Case Closed				
Status: Case Closed				
Global Id: T0606700284				

Sacramento Co. CS: List of sites where unauthorized releases of potentially hazardous materials have occurred.

A review of the Sacramento Co. CS list, as provided by EDR, and dated 06/18/2021 has revealed that there is 1 Sacramento Co. CS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***9800 WATERMAN***	***WNW 1/4 - 1/2 (0.398 mi.)***	***A3***	***11***
Date Closed: 04/04/2004				
Facility Id: RO0001466				

ADDITIONAL ENVIRONMENTAL RECORDS

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 03/21/2022 has revealed that there are 2 Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***9800 WATERMAN***	***WNW 1/4 - 1/2 (0.398 mi.)***	***A3***	***11***

Cleanup Status: COMPLETED - CASE CLOSED

Lower Elevation	Address	Direction / Distance	Map ID	Page
KINGSFORD PROD CO	***10000 WATERMAN***	***SW 1/4 - 1/2 (0.436 mi.)***	***B5***	***14***
Cleanup Status: COMPLETED - CASE CLOSED				

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2019 has revealed that there is 1 HAZNET site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SACRAMENTO COUNTY WA	***9372 MAINLINE DR***	***NW 1/8 - 1/4 (0.219 mi.)***	***1***	***9***
GEPAID: CAC002663025				

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
KINGSFORD PROD CO	***10000 WATERMAN***	***SW 1/4 - 1/2 (0.436 mi.)***	***B5***	***14***
Reg Id: 340352				

Notify 65: 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.

A review of the Notify 65 list, as provided by EDR, and dated 03/11/2022 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***9800 WATERMAN***	***WNW 1/4 - 1/2 (0.398 mi.)***	***A3***	***11***

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

EXECUTIVE SUMMARY

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 are 4 RGA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	9800 WATERMAN	WNW 1/4 - 1/2 (0.398 mi.)	A2	10

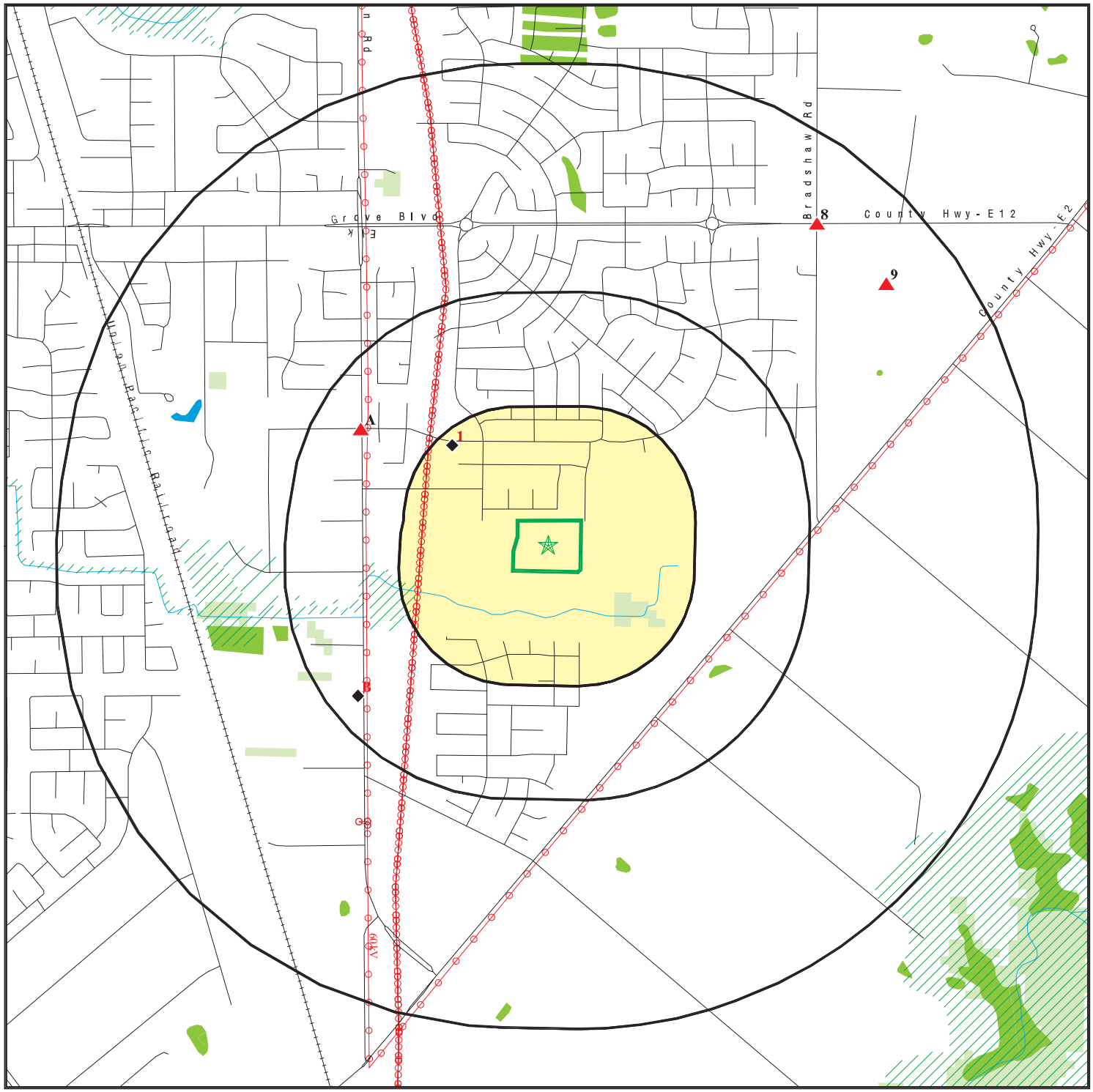
Lower Elevation	Address	Direction / Distance	Map ID	Page
KINGSFORD PRODUCTS C	10000 WATERMAN ROAD	SW 1/4 - 1/2 (0.436 mi.)	B4	14
KINGSFORD PROD CO	10000 WATERMAN RD	SW 1/4 - 1/2 (0.436 mi.)	B6	20
KINGSFORD PROD CO (C	10000 WATERMAN RD	SW 1/4 - 1/2 (0.436 mi.)	B7	21

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
PROPOSED CROOKED CREEK ELEMENTARY	ENVIROSTOR, SCH
KINGSFORD CHARCOAL PLANT	Sacramento Co. CS
KINGSFORD CHARCOAL COMPANY	Sacramento Co. CS

OVERVIEW MAP - 7020313.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- 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:	Milestone II Property	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Wyland Drive Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.398869 / 121.345528	INQUIRY #:	7020313.2s
		DATE:	June 15, 2022 3:56 pm

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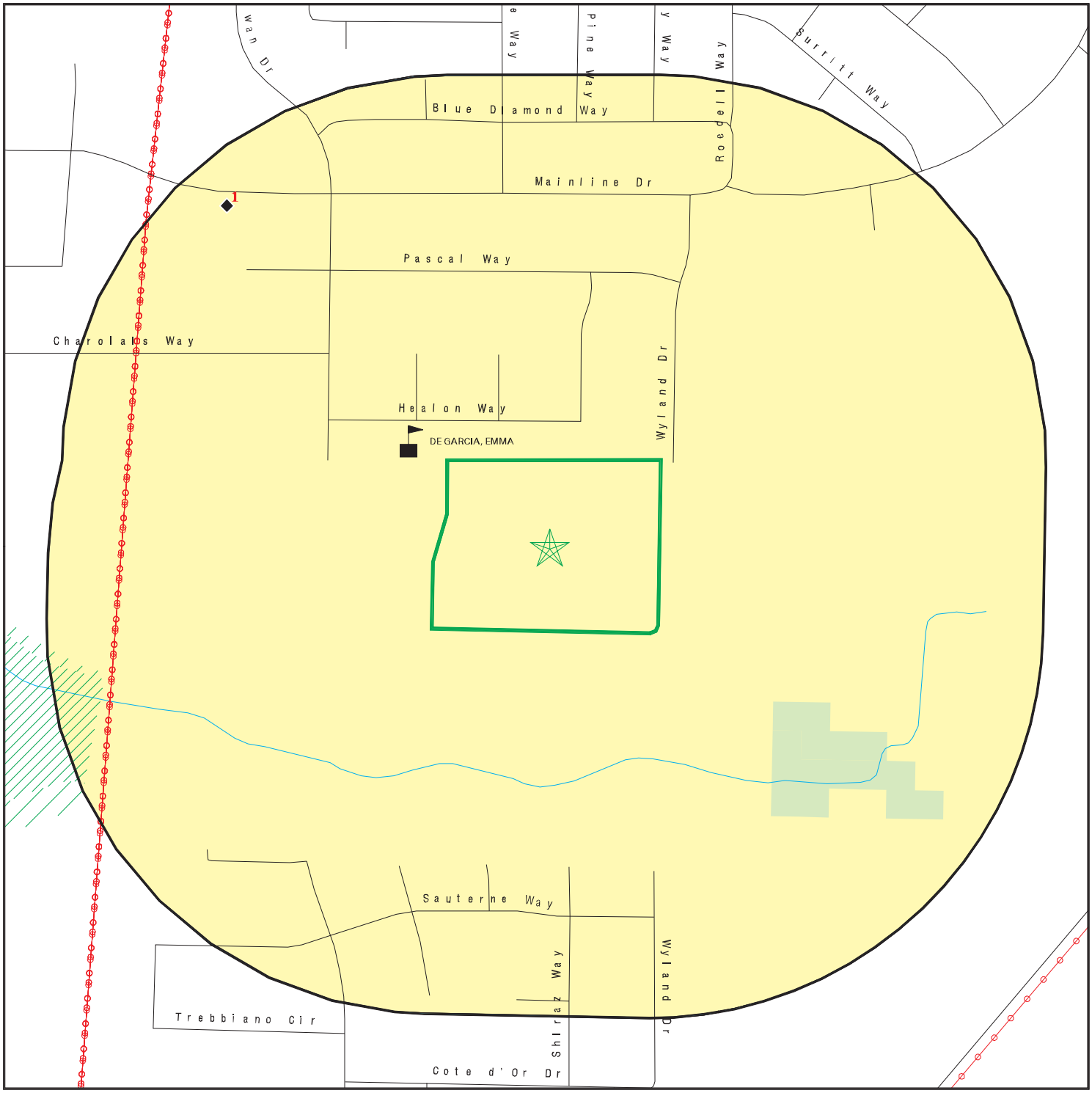
DETAIL MAP - 7020313.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

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:	Milestone II Property	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Wyland Drive Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.398869 / 121.345528	INQUIRY #:	7020313.2s
		DATE:	June 15, 2022 3:57 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.250		0	0	NR	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	0	2	NR	2
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	2	NR	NR	2
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Sacramento Co. CS	0.500		0	0	1	NR	NR	1
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	TP		NR	NR	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	TP		NR	NR	NR	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		0	0	NR	NR	NR	0
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
AQUEOUS FOAM	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0

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
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	TP		NR	NR	NR	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
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	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
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		0	0	2	NR	NR	2
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
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	0.250		0	1	NR	NR	NR	1
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	1	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
Sacramento Co. ML	0.250		0	0	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	1	0	NR	1
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
WIP	0.250		0	0	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
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
MINES MRDS	TP		NR	NR	NR	NR	NR	0
HWTS	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

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
RGA LUST	0.500		0	0	4	NR	NR	4
- Totals --		0	0	1	11	2	0	14

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
NW
1/8-1/4
0.219 mi.
1154 ft.

SACRAMENTO COUNTY WATER RESOURCES
9372 MAINLINE DR
ELK GROVE, CA 95624

HAZNET **S112983631**
HWTS **N/A**

Relative:
Lower

Actual:
51 ft.

HAZNET:

Name:	SACRAMENTO COUNTY WATER RESOURCES
Address:	9372 MAINLINE DR
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624
Contact:	MIKE LANDY
Telephone:	9168750184
Mailing Name:	Not reported
Mailing Address:	10151 FLORIN RD
Year:	2011
Gepaid:	CAC002663025
TSD EPA ID:	CAD008364432
CA Waste Code:	135 - Unspecified aqueous solution
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.1

Additional Info:

Year:	2011
Gen EPA ID:	CAC002663025
Shipment Date:	20110214
Creation Date:	4/22/2011 18:30:09
Receipt Date:	20110223
Manifest ID:	006445381JJK
Trans EPA ID:	CAR000159665
Trans Name:	PARC SPECIALTY CONTRACTORS
Trans 2 EPA ID:	CAR000177527
Trans 2 Name:	PHILIP WEST INDUSTRIAL SERVICES
TSDF EPA ID:	CAD008364432
Trans Name:	RHO-CHEM LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	135 - Unspecified aqueous solution
RCRA Code:	D009
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	SACRAMENTO COUNTY WATER RESOURCES
Address:	9372 MAINLINE DR
Address 2:	Not reported

SACRAMENTO COUNTY WATER RESOURCES (Continued) **S112983631**

City,State,Zip:	ELK GROVE, CA 95624
EPA ID:	CAC002663025
Inactive Date:	08/14/2011
Create Date:	02/14/2011
Last Act Date:	Not reported
Mailing Name:	Not reported
Mailing Address:	10151 FLORIN RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SACRAMENTO, CA 958299336
Owner Name:	SACRAMENTO COUNTY WATER RESOURCES
Owner Address:	3847 BRANCH CENTER RD
Owner Address 2:	Not reported
Owner City,State,Zip:	SACRAMENTO, CA 958273824
Contact Name:	MIKE LANDY
Contact Address:	3847 BRANCH CENTER RD
Contact Address 2:	Not reported
City,State,Zip:	SACRAMENTO, CA 958273824
Facility Status:	Inactive
Facility Type:	TEMPORARY
Category:	STATE
Latitude:	38.40225
Longitude:	-121.34993

A2 **RESIDENCE** **RGA LUST** **S114676098**
WNW **9800 WATERMAN** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.398 mi.
2099 ft. **Site 1 of 2 in cluster A**

Relative: **Higher**
Actual: **56 ft.**

RGA LUST:

Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		
State:	ELK GROVE		
	2012	RESIDENCE	9800 WATERMAN
Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		
State:	ELK GROVE		
	2011	RESIDENCE	9800 WATERMAN
Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		
State:	ELK GROVE		
	2010	RESIDENCE	9800 WATERMAN
Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		
State:	ELK GROVE		
	2009	RESIDENCE	9800 WATERMAN
Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		
State:	ELK GROVE		
	2008	RESIDENCE	9800 WATERMAN
Name:	RESIDENCE		
Address:	9800 WATERMAN		
City:	ELK GROVE		

RESIDENCE (Continued) **S114676098**

State: ELK GROVE
2007 RESIDENCE 9800 WATERMAN
Name: RESIDENCE
Address: 9800 WATERMAN
City: ELK GROVE
State: ELK GROVE
2006 RESIDENCE 9800 WATERMAN
Name: RESIDENCE
Address: 9800 WATERMAN
City: ELK GROVE
State: ELK GROVE
2005 RESIDENCE 9800 WATERMAN
Name: RESIDENCE
Address: 9800 WATERMAN
City: ELK GROVE
State: ELK GROVE
2003 RESIDENCE 9800 WATERMAN

A3 **RESIDENCE** **LUST** **S105174022**
WNW **9800 WATERMAN** **Sacramento Co. CS** **N/A**
1/4-1/2 **ELK GROVE, CA 95624** **Cortese**
0.398 mi. **Notify 65**
2099 ft. **Site 2 of 2 in cluster A** **CERS**

Relative:
Higher

Actual:
56 ft.

LUST:
Name: RESIDENCE
Address: 9800 WATERMAN
City,State,Zip: ELK GROVE, CA 95624
Lead Agency: SACRAMENTO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606791922
Global Id: T0606791922
Latitude: 38.407002
Longitude: -121.35323
Status: Completed - Case Closed
Status Date: 04/29/2003
Case Worker: Not reported
RB Case Number: 341354
Local Agency: Not reported
File Location: Local Agency
Local Case Number: F589
Potential Media Affect: Aquifer used for drinking water supply, Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0606791922
Contact Type: Regional Board Caseworker
Contact Name: VERA FISCHER
Organization Name: CENTRAL VALLEY RWQCB (REGION 5S)
Address: 11020 SUN CENTER DRIVE #200
City: RANCHO CORDOVA
Email: vera.fischer@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0606791922
Action Type: ENFORCEMENT

RESIDENCE (Continued) **S105174022**

Date: 06/21/2001
Action: Notification - Proposition 65

Global Id: T0606791922
Action Type: Other
Date: 01/02/1965
Action: Leak Reported

Global Id: T0606791922
Action Type: REMEDIATION
Date: 02/28/2003
Action: Excavation

Global Id: T0606791922
Action Type: Other
Date: 06/22/2001
Action: Leak Discovery

Global Id: T0606791922
Action Type: ENFORCEMENT
Date: 07/30/2001
Action: Notice of Responsibility

LUST:
Global Id: T0606791922
Status: Open - Case Begin Date
Status Date: 06/21/2001

Global Id: T0606791922
Status: Completed - Case Closed
Status Date: 04/29/2003

LUST REG 5:
Name: RESIDENCE
Address: 9800 WATERMAN
City: ELK GROVE
Region: 5
Status: Case Closed
Case Number: 341354
Case Type: A, S
Substance: GASOLINE
Staff Initials: VJF
Lead Agency: Local
Program: LUST
MTBE Code: N/A

Sacramento Co. CS:
Name: RESIDENCE
Address: 9800 WATERMAN RD
City,State,Zip: ELK GROVE, CA
State Site Number: F589
Lead Staff: Leibold, R.
Lead Agency: Not reported
Remedial Action Taken: NO
Substance: Not reported

RESIDENCE (Continued) **S105174022**

Date Reported: Not reported
Facility Id: RO0001466
Case Type: Soil only
Case Closed: Y
Date Closed: 04/04/2004
Case Type: Soil only affected
Substance: Not reported

CORTESE:
Name: RESIDENCE
Address: 9800 WATERMAN
City,State,Zip: ELK GROVE, CA 95624
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0606791922
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
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

NOTIFY 65:
Name: RESIDENCE
Address: 9800 WATERMAN
City,State,Zip: ELK GROVE, CA 95624
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: 06/21/2001
Incident Description: Not reported
Global ID: Not reported
Status: Not reported

Name: RESIDENCE
Address: 9800 WATERMAN
City,State,Zip: ELK GROVE, CA 95624
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported

RESIDENCE (Continued) **S105174022**

Issue Date: Not reported
Incident Description: Not reported
Global ID: Not reported
Status: Not reported

CERS:
Name: RESIDENCE
Address: 9800 WATERMAN
City,State,Zip: ELK GROVE, CA 95624
Site ID: 216195
CERS ID: T0606791922
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: VERA FISCHER - CENTRAL VALLEY RWQCB (REGION 5S)
Entity Title: Not reported
Affiliation Address: 11020 SUN CENTER DRIVE #200
Affiliation City: RANCHO CORDOVA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

B4 **KINGSFORD PRODUCTS COMPANY** **RGA LUST** **S114640160**
SW **10000 WATERMAN ROAD** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.436 mi.
2302 ft. **Site 1 of 4 in cluster B**

Relative:
Lower

Actual:
51 ft.

RGA LUST:
Name: KINGSFORD PRODUCTS COMPANY
Address: 10000 WATERMAN ROAD
City: ELK GROVE
State: ELK GROVE
1992 KINGSFORD PRODUCTS COMPANY 10000 WATERMAN ROAD

B5 **KINGSFORD PROD CO** **LUST** **1000591231**
SW **10000 WATERMAN** **Cortese** **N/A**
1/4-1/2 **ELK GROVE, CA 95624** **EMI**
0.436 mi. **HIST CORTESE**
2302 ft. **Site 2 of 4 in cluster B** **Sacramento Co. ML**
CERS

Relative:
Lower

Actual:
51 ft.

LUST:
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City,State,Zip: ELK GROVE, CA 95624
Lead Agency: SACRAMENTO COUNTY LOP
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0606700284
Global Id: T0606700284
Latitude: 38.3977578
Longitude: -121.3532017
Status: Completed - Case Closed

KINGSFORD PROD CO (Continued) **1000591231**

Status Date: 01/17/1996
Case Worker: Not reported
RB Case Number: 340352
Local Agency: Not reported
File Location: Not reported
Local Case Number: 0508/71508
Potential Media Affect: Soil
Potential Contaminants of Concern: Other Solvent or Non-Petroleum Hydrocarbon
Site History: Not reported

LUST:
Global Id: T0606700284
Contact Type: Regional Board Caseworker
Contact Name: VERA FISCHER
Organization Name: CENTRAL VALLEY RWQCB (REGION 5S)
Address: 11020 SUN CENTER DRIVE #200
City: RANCHO CORDOVA
Email: vera.fischer@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0606700284
Action Type: ENFORCEMENT
Date: 01/17/1996
Action: Closure/No Further Action Letter

Global Id: T0606700284
Action Type: Other
Date: 02/07/1992
Action: Leak Reported

Global Id: T0606700284
Action Type: ENFORCEMENT
Date: 08/26/1992
Action: * No Action

Global Id: T0606700284
Action Type: RESPONSE
Date: 01/12/1994
Action: Other Report / Document

Global Id: T0606700284
Action Type: RESPONSE
Date: 05/02/1991
Action: Other Report / Document

Global Id: T0606700284
Action Type: RESPONSE
Date: 01/22/1991
Action: Other Report / Document

Global Id: T0606700284
Action Type: RESPONSE
Date: 12/31/1993
Action: Monitoring Report - Quarterly

Global Id: T0606700284

KINGSFORD PROD CO (Continued) **1000591231**

Action Type: RESPONSE
Date: 03/22/1994
Action: Correspondence

Global Id: T0606700284
Action Type: RESPONSE
Date: 09/30/1993
Action: Monitoring Report - Quarterly

Global Id: T0606700284
Action Type: RESPONSE
Date: 03/31/1994
Action: Monitoring Report - Quarterly

Global Id: T0606700284
Action Type: RESPONSE
Date: 05/03/1994
Action: Correspondence

Global Id: T0606700284
Action Type: RESPONSE
Date: 12/09/1993
Action: Other Report / Document

Global Id: T0606700284
Action Type: RESPONSE
Date: 12/06/1990
Action: Correspondence

Global Id: T0606700284
Action Type: RESPONSE
Date: 05/16/1989
Action: Unauthorized Release Form

Global Id: T0606700284
Action Type: RESPONSE
Date: 08/28/1989
Action: Other Report / Document

Global Id: T0606700284
Action Type: ENFORCEMENT
Date: 08/26/1992
Action: Notice of Reimbursement

Global Id: T0606700284
Action Type: ENFORCEMENT
Date: 09/02/1992
Action: Notice of Reimbursement

Global Id: T0606700284
Action Type: RESPONSE
Date: 05/03/1994
Action: Correspondence

Global Id: T0606700284
Action Type: RESPONSE
Date: 09/11/1990

KINGSFORD PROD CO (Continued) **1000591231**

Action: Other Report / Document

Global Id: T0606700284
Action Type: RESPONSE
Date: 06/30/1994
Action: Monitoring Report - Quarterly

Global Id: T0606700284
Action Type: RESPONSE
Date: 09/30/1992
Action: Monitoring Report - Quarterly

Global Id: T0606700284
Action Type: ENFORCEMENT
Date: 08/26/1992
Action: * Historical Enforcement

Global Id: T0606700284
Action Type: Other
Date: 02/07/1992
Action: Leak Discovery

LUST:
Global Id: T0606700284
Status: Open - Case Begin Date
Status Date: 05/01/1989

Global Id: T0606700284
Status: Open - Remediation
Status Date: 05/01/1989

Global Id: T0606700284
Status: Open - Remediation
Status Date: 07/17/1990

Global Id: T0606700284
Status: Open - Site Assessment
Status Date: 07/17/1990

Global Id: T0606700284
Status: Open - Site Assessment
Status Date: 02/07/1992

Global Id: T0606700284
Status: Completed - Case Closed
Status Date: 01/17/1996

LUST REG 5:
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
Region: 5
Status: Case Closed
Case Number: 340352
Case Type: Soil only

KINGSFORD PROD CO (Continued) **1000591231**

Substance: HYDROCARBONS
Staff Initials: VJF
Lead Agency: Local
Program: LUST
MTBE Code: N/A

CORTESE:

Name:	KINGSFORD PROD CO
Address:	10000 WATERMAN RD
City,State,Zip:	ELK GROVE, CA 95624
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0606700284
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
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

EMI:

Name:	KINGSFORD COMPANY
Address:	10000 WATERMAN RD
City,State,Zip:	ELK GROVE, CA 95624
Year:	1987
County Code:	34
Air Basin:	SV
Facility ID:	7
Air District Name:	SAC
SIC Code:	2861
Air District Name:	SACRAMENTO METROPOLITAN AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	5
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	7
Part. Matter 10 Micrometers and Smllr Tons/Yr:	7

HIST CORTESE:

edr_fname:	KINGSFORD PROD CO
edr_fadd1:	10000 WATERMAN

KINGSFORD PROD CO (Continued) **1000591231**

City,State,Zip: ELK GROVE, CA 95624
Region: CORTESE
Facility County Code: 34
Reg By: LTNKA
Reg Id: 340352

Sacramento Co. ML:
Name: THE KINGSFORD COMPANY
Address: 10000 WATERMAN RD
City,State,Zip: ELK GROVE, CA 95624
Facility Id: G0105786
Facility Status: Inactive. Included on a listing no longer updated.
FD: G
Billing Codes BP: Out of Business
Billing Codes UST: No Tanks
WG Bill Code: Oil Changed by Outside Company-No Fee
Target Property Bill Cod: 51
Food Bill Code: 51
CUPA Permit Date: Not reported
HAZMAT Permit Date: 06/01/1990
HAZMAT Inspection Date: 07/19/1990
Hazmat Date BP Received: Not reported
UST Permit Dt: Not reported
UST Inspection Date: 11/10/1988
UST Tank Test Date: Not reported
Number of Tanks: 0
UST Tank Test Date: Not reported
SIC Code: 2499
Tier Permitting: Not reported
AST Bill Code: Not reported
CALARP Bill Code: Not reported

CERS:
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City,State,Zip: ELK GROVE, CA 95624
Site ID: 211987
CERS ID: T0606700284
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker
Entity Name: VERA FISCHER - CENTRAL VALLEY RWQCB (REGION 5S)
Entity Title: Not reported
Affiliation Address: 11020 SUN CENTER DRIVE #200
Affiliation City: RANCHO CORDOVA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: ,

B6 **KINGSFORD PROD CO** **RGA LUST** **S114640157**
SW **10000 WATERMAN RD** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.436 mi.
2302 ft. **Site 3 of 4 in cluster B**

Relative:
Lower

Actual:
51 ft.

RGA LUST:
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2012 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2011 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2010 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2009 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2008 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2007 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2006 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2005 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2003 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2002 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD

KINGSFORD PROD CO (Continued) **S114640157**

City: ELK GROVE
State: ELK GROVE
2001 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
2000 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
1998 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
1997 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
1996 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
1995 KINGSFORD PROD CO 10000 WATERMAN RD
Name: KINGSFORD PROD CO
Address: 10000 WATERMAN RD
City: ELK GROVE
State: ELK GROVE
1994 KINGSFORD PROD CO 10000 WATERMAN RD

B7 **KINGSFORD PROD CO (CLOSED-CO)** **RGA LUST** **S114640156**
SW **10000 WATERMAN RD** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.436 mi.
2302 ft. **Site 4 of 4 in cluster B**

Relative: RGA LUST:
Lower
Name: KINGSFORD PROD CO (CLOSED-CO)
Actual: Address: 10000 WATERMAN RD
51 ft. City: ELK GROVE
State: ELK GROVE
1993 KINGSFORD PROD CO (CLOSED-CO) 10000 WATERMAN RD

8
NE
1/2-1
0.830 mi.
4384 ft.

ELK GROVE MONTESSORI
BRADSHAW ROAD AND ELK GROVE BOULEVARD
ELK GROVE, CA 95624

ENVIROSTOR
SCH
CERS

S118757197
N/A

Relative:
Higher

Actual:
60 ft.

ENVIROSTOR:

Name:	ELK GROVE MONTESSORI
Address:	BRADSHAW ROAD AND ELK GROVE BOULEVARD
City,State,Zip:	ELK GROVE, CA 95624
Facility ID:	60001032
Status:	No Action Required
Status Date:	03/09/2009
Site Code:	104660
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	7.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Not reported
Supervisor:	Mark Malinowski
Division Branch:	Northern California Schools & Santa Susana
Assembly:	09
Senate:	06
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	38.40765
Longitude:	-121.3334
APN:	NONE SPECIFIED
Past Use:	NONE
Potential COC:	NONE SPECIFIED No Contaminants found
Confirmed COC:	No Contaminants found
Potential Description:	NMA
Alias Name:	104660
Alias Type:	Project Code (Site Code)
Alias Name:	60001032
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	03/05/2009
Comments:	CRU checklist complete.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	01/27/2009
Comments:	DTSC approved the Phase I with a no action determination on 1/27/09.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported

ELK GROVE MONTESSORI (Continued) **S118757197**

Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELK GROVE MONTESSORI
Address: BRADSHAW ROAD AND ELK GROVE BOULEVARD
City,State,Zip: ELK GROVE, CA 95624
Facility ID: 60001032
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 7.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: Mark Malinowski
Division Branch: Northern California Schools & Santa Susana
Site Code: 104660
Assembly: 09
Senate: 06
Special Program Status: Not reported
Status: No Action Required
Status Date: 03/09/2009
Restricted Use: NO
Funding: School District
Latitude: 38.40765
Longitude: -121.3334
APN: NONE SPECIFIED
Past Use: NONE
Potential COC: NONE SPECIFIED, No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: 104660
Alias Type: Project Code (Site Code)
Alias Name: 60001032
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 03/05/2009
Comments: CRU checklist complete.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 01/27/2009
Comments: DTSC approved the Phase I with a no action determination on 1/27/09.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported

ELK GROVE MONTESSORI (Continued) **S118757197**

Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

CERS:

Name:	ELK GROVE MONTESSORI
Address:	BRADSHAW ROAD AND ELK GROVE BOULEVARD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	371089
CERS ID:	60001032
CERS Description:	School Investigation

Affiliation:

Affiliation Type Desc:	Supervisor
Entity Name:	MARK MALINOWSKI
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:	,

9
NE
1/2-1
0.845 mi.
4462 ft.

ELK GROVE EXPANSION MONTESSORI **ENVIROSTOR** **S118757269**
BRANSHAW ROAD AND ELK GROVE BLVD. **SCH** **N/A**
ELK GROVE, CA 95624

Relative:
Higher

Actual:
58 ft.

ENVIROSTOR:

Name:	ELK GROVE EXPANSION MONTESSORI
Address:	BRANSHAW ROAD AND ELK GROVE BLVD.
City,State,Zip:	ELK GROVE, CA 95624
Facility ID:	60001825
Status:	No Action Required
Status Date:	11/15/2012
Site Code:	104714
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	2.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Mellan Songco
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Assembly:	15
Senate:	06
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	38.4072
Longitude:	-121.3319

ELK GROVE EXPANSION MONTESSORI (Continued) **S118757269**

APN: 134-0110-076
Past Use: NONE
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: No Contaminants found
Potential Description: NMA
Alias Name: 134-0110-076
Alias Type: APN
Alias Name: 104714
Alias Type: Project Code (Site Code)
Alias Name: 60001825
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 11/09/2012
Comments: On November 9, 2012, DTSC approved the Phase I ESA & the Revised Phase I Update with a no action determination.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Inspections/Visit (Non LUR)
Completed Date: 11/05/2012
Comments: On November 5, 2012, DTSC conducted a site visit with the District's consultant, Mr. Phil Hendrix.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 11/15/2012
Comments: DTSC sent the CRU memo.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: ELK GROVE EXPANSION MONTESSORI
Address: BRANSHAW ROAD AND ELK GROVE BLVD.
City,State,Zip: ELK GROVE, CA 95624
Facility ID: 60001825
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 2.5
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program

ELK GROVE EXPANSION MONTESSORI (Continued) **S118757269**

Project Manager:	Mellan Songco
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Site Code:	104714
Assembly:	15
Senate:	06
Special Program Status:	Not reported
Status:	No Action Required
Status Date:	11/15/2012
Restricted Use:	NO
Funding:	School District
Latitude:	38.4072
Longitude:	-121.3319
APN:	134-0110-076
Past Use:	NONE
Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	No Contaminants found
Potential Description:	NMA
Alias Name:	134-0110-076
Alias Type:	APN
Alias Name:	104714
Alias Type:	Project Code (Site Code)
Alias Name:	60001825
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	11/09/2012
Comments:	On November 9, 2012, DTSC approved the Phase I ESA & the Revised Phase I Update with a no action determination.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	11/05/2012
Comments:	On November 5, 2012, DTSC conducted a site visit with the District's consultant, Mr. Phil Hendrix.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/15/2012
Comments:	DTSC sent the CRU memo.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ELK GROVE	S126143197	PROPOSED CROOKED CREEK ELEMENTARY	NORTHWEST CORNER OF WAYNE HEIN	95624	ENVIROSTOR, SCH
ELK GROVE	S106782303	KINGSFORD CHARCOAL PLANT	WATERMAN RD		Sacramento Co. CS
ELK GROVE	S106782302	KINGSFORD CHARCOAL COMPANY	WATERMAN RD		Sacramento Co. CS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

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: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/01/2022
Next Scheduled EDR Contact: 07/11/2022
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: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
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: 02/08/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 88

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/05/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/21/2022
Date Data Arrived at EDR: 02/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/24/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/21/2022
Date Data Arrived at EDR: 02/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 9

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/22/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/07/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 86

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/09/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

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: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
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: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/03/2022
Number of Days to Update: 87

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 09/19/2022
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: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
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: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

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: 03/16/2022
Next Scheduled EDR Contact: 07/04/2022
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: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/21/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
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: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 09/26/2022
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: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 02/15/2022
Date Data Arrived at EDR: 02/24/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 90

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 08/22/2022
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: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
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: 04/28/2022
Next Scheduled EDR Contact: 08/08/2022
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: 02/22/2022
Date Data Arrived at EDR: 02/23/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2022
Next Scheduled EDR Contact: 09/05/2022
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: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
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: 12/31/2019
Date Data Arrived at EDR: 01/20/2021
Date Made Active in Reports: 04/08/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 07/18/2022
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: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
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: 02/22/2022
Date Data Arrived at EDR: 02/23/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/24/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Quarterly

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 12/10/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 06/10/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
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

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: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 02/24/2022
Date Data Arrived at EDR: 02/25/2022
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
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: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 07/11/2022
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: 02/28/2022
Date Data Arrived at EDR: 02/28/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 86

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 05/31/2022
Next Scheduled EDR Contact: 09/12/2022
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: 03/21/2022
Date Data Arrived at EDR: 03/21/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 85

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
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: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
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: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
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: 02/28/2022
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/17/2022
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 04/06/2022
Next Scheduled EDR Contact: 07/04/2022
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: 12/01/2021
Date Data Arrived at EDR: 02/15/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/17/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
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: 05/06/2022
Next Scheduled EDR Contact: 08/22/2022
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: 03/21/2022
Date Data Arrived at EDR: 03/21/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
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: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
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: 05/06/2022
Next Scheduled EDR Contact: 08/15/2022
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: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85
Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 09/26/2022
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: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82
Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/20/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/20/2022
Next Scheduled EDR Contact: 08/01/2022
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: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 09/12/2022
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: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 01/25/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 08/15/2022
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: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/11/2022
Date Data Arrived at EDR: 03/15/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/02/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/28/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/26/2022
Next Scheduled EDR Contact: 08/08/2022
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: 12/31/2021
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
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: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/02/2022
Next Scheduled EDR Contact: 07/04/2022
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: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
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: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/01/2022
Next Scheduled EDR Contact: 07/11/2022
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: 02/01/2022
Date Data Arrived at EDR: 02/23/2022
Date Made Active in Reports: 05/24/2022
Number of Days to Update: 90

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022
Date Data Arrived at EDR: 03/22/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/26/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

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: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2022
Next Scheduled EDR Contact: 09/05/2022
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: 05/27/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/10/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 96

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 09/19/2022
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: 05/13/2022
Date Data Arrived at EDR: 05/18/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 13

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 05/18/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Quarterly

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: 02/17/2022
Date Data Arrived at EDR: 02/17/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 82

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/17/2022
Next Scheduled EDR Contact: 08/29/2022
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: 03/21/2022
Date Data Arrived at EDR: 03/21/2022
Date Made Active in Reports: 06/14/2022
Number of Days to Update: 85

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 12/07/2021
Date Data Arrived at EDR: 05/09/2022
Date Made Active in Reports: 05/17/2022
Number of Days to Update: 8

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/09/2022
Next Scheduled EDR Contact: 08/22/2022
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: 02/24/2022
Date Data Arrived at EDR: 02/25/2022
Date Made Active in Reports: 05/18/2022
Number of Days to Update: 82

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 02/17/2022
Date Data Arrived at EDR: 02/24/2022
Date Made Active in Reports: 05/18/2022
Number of Days to Update: 83

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/27/2021
Date Data Arrived at EDR: 09/01/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 79

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/01/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 78

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/13/2022
Next Scheduled EDR Contact: 09/26/2022
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: 04/12/2022
Date Data Arrived at EDR: 04/19/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 42

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/01/2022
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: 02/23/2022
Date Data Arrived at EDR: 02/24/2022
Date Made Active in Reports: 05/18/2022
Number of Days to Update: 83

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 08/22/2022
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: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Annually

ICE: ICE
Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/14/2022
Date Data Arrived at EDR: 02/15/2022
Date Made Active in Reports: 05/12/2022
Number of Days to Update: 86
Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/17/2022
Next Scheduled EDR Contact: 08/29/2022
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: 02/14/2022
Date Data Arrived at EDR: 02/15/2022
Date Made Active in Reports: 05/12/2022
Number of Days to Update: 86
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/17/2022
Next Scheduled EDR Contact: 08/29/2022
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: 01/03/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
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: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/01/2022
Number of Days to Update: 85
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
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: 02/17/2022
Date Data Arrived at EDR: 02/28/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 86
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 05/31/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/07/2022
Date Data Arrived at EDR: 02/08/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 86
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/09/2022
Next Scheduled EDR Contact: 08/22/2022
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: 02/28/2022
Date Data Arrived at EDR: 02/28/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 86
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 05/31/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
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: 03/11/2022
Date Data Arrived at EDR: 03/15/2022
Date Made Active in Reports: 06/08/2022
Number of Days to Update: 85
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
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: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region’s active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/18/2022
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: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 10/03/2022
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
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: 03/07/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/03/2022
Number of Days to Update: 87

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
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: 02/28/2022
Date Data Arrived at EDR: 02/28/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 86
Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 05/31/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/19/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 79
Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/19/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
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: 05/23/2022
Date Data Arrived at EDR: 05/23/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 05/23/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/27/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/05/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/26/2022
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 04/05/2022
Next Scheduled EDR Contact: 07/18/2022
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 12/28/2021
Date Data Arrived at EDR: 12/28/2021
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 80

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 02/04/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/17/2022
Date Data Arrived at EDR: 03/18/2022
Date Made Active in Reports: 06/08/2022
Number of Days to Update: 82

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 10/03/2022
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 01/24/2022
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 79

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/16/2022
Date Data Arrived at EDR: 02/17/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 82

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
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: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 02/10/2022
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 82

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
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: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/04/2022
Date Data Arrived at EDR: 04/05/2022
Date Made Active in Reports: 04/13/2022
Number of Days to Update: 8

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/18/2022
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 83

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/12/2022
Next Scheduled EDR Contact: 07/25/2022
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: 01/01/2022
Date Data Arrived at EDR: 01/21/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 80

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 10/03/2022
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 01/10/2022
Date Data Arrived at EDR: 01/12/2022
Date Made Active in Reports: 04/04/2022
Number of Days to Update: 82

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/13/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 11

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 09/14/2021
Number of Days to Update: 89
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/21/2022
Next Scheduled EDR Contact: 07/04/2022
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: 05/26/2021
Date Data Arrived at EDR: 07/09/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 82
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 07/25/2022
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: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
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: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/15/2022
Date Data Arrived at EDR: 02/17/2022
Date Made Active in Reports: 05/11/2022
Number of Days to Update: 83

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/04/2022
Next Scheduled EDR Contact: 07/11/2022
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: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 01/25/2022
Date Data Arrived at EDR: 01/26/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/03/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/02/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/14/2022
Date Data Arrived at EDR: 02/01/2022
Date Made Active in Reports: 04/18/2022
Number of Days to Update: 76

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 08/15/2022
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: 05/25/2022
Date Data Arrived at EDR: 05/26/2022
Date Made Active in Reports: 06/01/2022
Number of Days to Update: 6

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
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: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/31/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
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: 06/18/2021
Date Data Arrived at EDR: 09/28/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 77

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
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: 08/02/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 11/02/2021
Number of Days to Update: 90

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/29/2022
Date Data Arrived at EDR: 04/29/2022
Date Made Active in Reports: 05/05/2022
Number of Days to Update: 6

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
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: 05/12/2022
Date Data Arrived at EDR: 05/12/2022
Date Made Active in Reports: 05/18/2022
Number of Days to Update: 6

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
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: 02/28/2022
Date Data Arrived at EDR: 02/28/2022
Date Made Active in Reports: 05/25/2022
Number of Days to Update: 86

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 05/31/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/27/2021
Date Data Arrived at EDR: 03/04/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 88

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 7
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 02/03/2022
Date Data Arrived at EDR: 02/04/2022
Date Made Active in Reports: 05/02/2022
Number of Days to Update: 87
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 01/18/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/27/2022
Number of Days to Update: 97
Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 05/06/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/09/2022
Next Scheduled EDR Contact: 09/26/2022
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/15/2022
Date Data Arrived at EDR: 02/16/2022
Date Made Active in Reports: 05/13/2022
Number of Days to Update: 86

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/10/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/02/2022
Next Scheduled EDR Contact: 09/19/2022
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: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/14/2022
Date Data Arrived at EDR: 02/16/2022
Date Made Active in Reports: 05/12/2022
Number of Days to Update: 85

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
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: 05/19/2022
Next Scheduled EDR Contact: 09/05/2022
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
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: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
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: 05/12/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 10/03/2022
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/14/2022
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/11/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 11/23/2021
Date Data Arrived at EDR: 11/29/2021
Date Made Active in Reports: 02/11/2022
Number of Days to Update: 74

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/25/2022
Next Scheduled EDR Contact: 09/12/2022
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/13/2022
Date Data Arrived at EDR: 01/14/2022
Date Made Active in Reports: 04/06/2022
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 04/26/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/15/2022
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/14/2022
Next Scheduled EDR Contact: 08/01/2022
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: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/08/2022
Number of Days to Update: 78

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 03/23/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/04/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/27/2021
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 04/11/2022
Number of Days to Update: 81
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/18/2022
Next Scheduled EDR Contact: 08/01/2022
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: 02/28/2022
Date Data Arrived at EDR: 03/08/2022
Date Made Active in Reports: 06/02/2022
Number of Days to Update: 86
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/07/2022
Next Scheduled EDR Contact: 09/19/2022
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: 12/27/2021
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 03/18/2022
Number of Days to Update: 73
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/24/2022
Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/26/2022
Date Data Arrived at EDR: 01/27/2022
Date Made Active in Reports: 04/14/2022
Number of Days to Update: 77
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/21/2022
Next Scheduled EDR Contact: 08/08/2022
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: 12/03/2021
Date Data Arrived at EDR: 02/11/2022
Date Made Active in Reports: 05/06/2022
Number of Days to Update: 84
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/09/2022
Next Scheduled EDR Contact: 08/22/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/07/2022
Next Scheduled EDR Contact: 07/18/2022
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: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/28/2022
Next Scheduled EDR Contact: 08/08/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2022
Next Scheduled EDR Contact: 07/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/16/2022
Next Scheduled EDR Contact: 08/29/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2022
Next Scheduled EDR Contact: 09/19/2022
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

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

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MILESTONE II PROPERTY
WYLAND DRIVE
ELK GROVE, CA 95624

TARGET PROPERTY COORDINATES

Latitude (North):	38.398869 - 38ˆ 23’ 55.93’’
Longitude (West):	121.345528 - 121ˆ 20’ 43.90’’
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	644476.2
UTM Y (Meters):	4251161.0
Elevation:	52 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12021595 ELK GROVE, CA
Version Date:	2018

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).

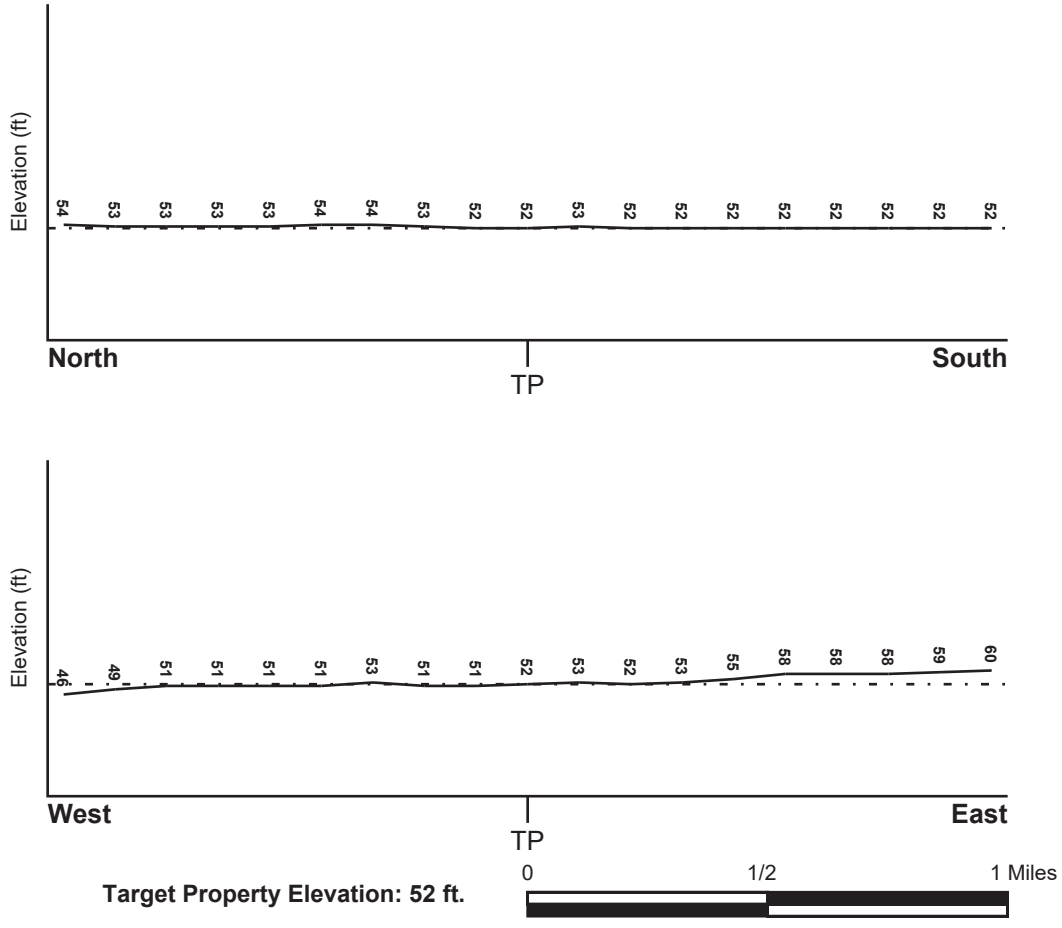
TOPOGRAPHIC INFORMATION

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 SW

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
06067C0338H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06067C0336H	FEMA FIRM Flood data
06067C0337H	FEMA FIRM Flood data
06067C0339H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ELK GROVE	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

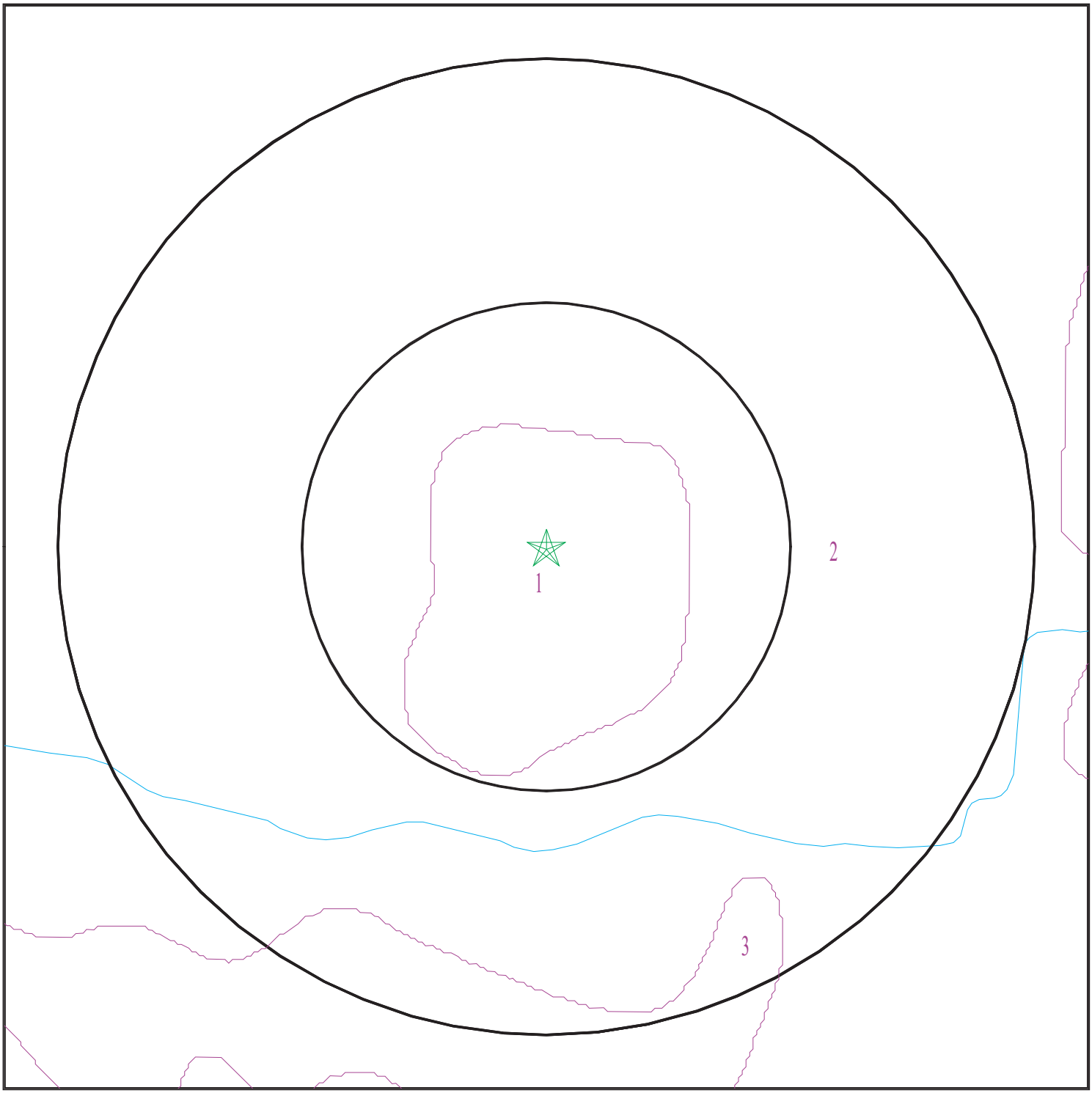
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

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 - 7020313.2s



SITE NAME:	Milestone II Property	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Wyland Drive Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.398869 / 121.345528	INQUIRY #:	7020313.2s
		DATE:	June 15, 2022 3:57 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: SAN JOAQUIN

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: Moderately well drained

Hydric Status: Partially 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	22 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
2	22 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
3	27 inches	53 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
4	53 inches	59 inches	stratified sandy loam to loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1

Soil Map ID: 2

Soil Component Name: SAN JOAQUIN

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: Moderately well drained

Hydric Status: Partially 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	22 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
2	22 inches	27 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
3	27 inches	53 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
4	53 inches	59 inches	stratified sandy loam to loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: SAN JOAQUIN

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: Moderately well drained

Hydric Status: Partially 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	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
2	14 inches	20 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
3	20 inches	46 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1
4	46 inches	59 inches	stratified sandy loam to loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 1.4 Min: 0.42	Max: 7.8 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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
1	USGS40000188111	0 - 1/8 Mile NW
A4	USGS40000188129	1/4 - 1/2 Mile NW
6	USGS40000188134	1/2 - 1 Mile NW
C11	USGS40000188086	1/2 - 1 Mile WSW
D14	USGS40000188140	1/2 - 1 Mile NW
16	USGS40000188125	1/2 - 1 Mile ENE
19	USGS40000188073	1/2 - 1 Mile SW
21	USGS40000188068	1/2 - 1 Mile SSW

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
2	CADWR0000030659	1/8 - 1/4 Mile SSW
3	6557	1/4 - 1/2 Mile WNW
A5	CAUSGSN00006379	1/2 - 1 Mile NW
7	CADWR9000039106	1/2 - 1 Mile East
B8	6558	1/2 - 1 Mile West
B9	CADDW0000004041	1/2 - 1 Mile WNW
10	CADWR0000009882	1/2 - 1 Mile NE
12	CADWR9000039131	1/2 - 1 Mile North
D13	CADDW0000013315	1/2 - 1 Mile NW
C15	CADWR9000039090	1/2 - 1 Mile WSW
E17	CADDW0000013848	1/2 - 1 Mile North
E18	CAPFAS000001065	1/2 - 1 Mile North
20	CADPR0000004182	1/2 - 1 Mile SSE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

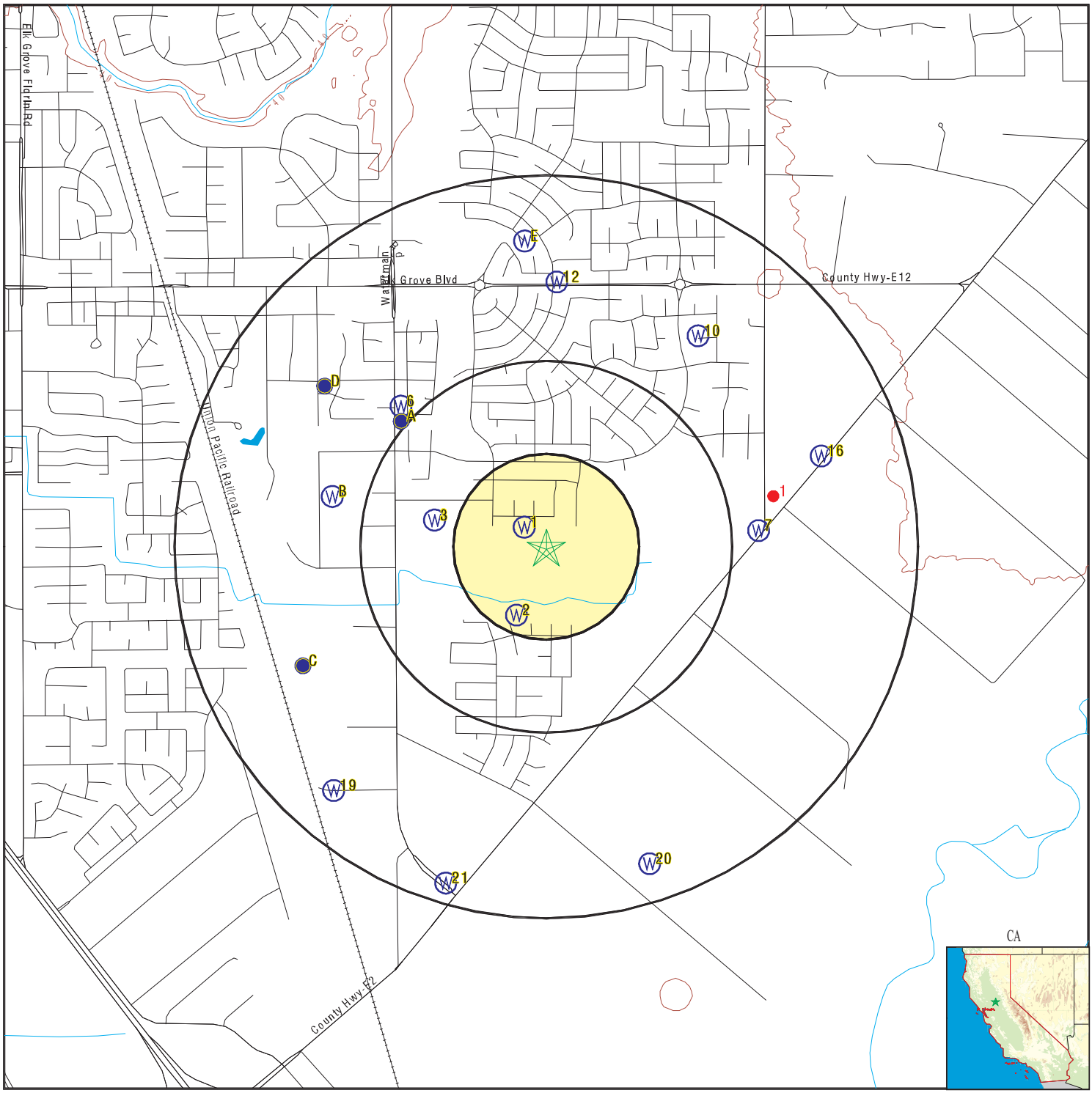
MAP ID	WELL ID	LOCATION FROM TP

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG14000008034	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 7020313.2s



- 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: Milestone II Property	CLIENT: Wallace - Kuhl & Associates
ADDRESS: Wyland Drive Elk Grove CA 95624	CONTACT: Nancy Malaret
LAT/LONG: 38.398869 / 121.345528	INQUIRY #: 7020313.2s DATE: June 15, 2022 3:57 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NW
0 - 1/8 Mile
Higher

FED USGS **USGS40000188111**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E05L001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19751024	Well Depth:	188
Well Depth Units:	ft	Well Hole Depth:	315
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1975-10-24
Feet below surface:	103.00	Feet to sea level:	Not Reported
Note:	Not Reported		

2
SSW
1/8 - 1/4 Mile
Lower

CA WELLS **CADWR0000030659**

Well ID:	06N06E05E001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	06N06E05E001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=06N06E05E001M&store_num=		
GeoTracker Data:	Not Reported		

3
WNW
1/4 - 1/2 Mile
Higher

CA WELLS **6557**

Seq:	6557	Prim sta c:	06N/06E-06H01 M
Frds no:	3410008004	County:	34
District:	09	User id:	TEN
System no:	3410008	Water type:	G
Source nam:	WELL 04 - WEBB STREET	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	382400.0	Longitude:	1212100.0
Precision:	8	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3410008	System nam:	Elk Grove Water Works
Hqname:	Not Reported	Address:	9257 Elk Grove Blvd.
City:	Elk Grove	State:	CA
Zip:	95624	Zip ext:	Not Reported
Pop serv:	23000	Connection:	6935
Area serve:	ELK GROVE		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A4
NW
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40000188129**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E05E002M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19760101	Well Depth:	165
Well Depth Units:	ft	Well Hole Depth:	250
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1976-01-01
Feet below surface:	106.00	Feet to sea level:	Not Reported
Note:	Not Reported		

A5
NW
1/2 - 1 Mile
Higher | **CA WELLS** | **CAUSGSN00006379**

Well ID:	USGS-382416121210601	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-382416121210601	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-382416121210601&store_num=		
GeoTracker Data:	Not Reported		

6
NW
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40000188134**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E05E001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19660101	Well Depth:	160
Well Depth Units:	ft	Well Hole Depth:	173
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1966-01-01
Feet below surface:	91.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

7
East
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000039106**

State Well #:	06N06E05J002M	Station ID:	5602
Well Name:	Not Reported	Basin Name:	South American
Well Use:	Residential	Well Type:	Unknown
Well Depth:	160	Well Completion Rpt #:	Not Reported

B8
West
1/2 - 1 Mile
Lower

CA WELLS **6558**

Seq:	6558	Prim sta c:	06N/06E-06J01 M
Frds no:	3410008011	County:	34
District:	09	User id:	TEN
System no:	3410008	Water type:	G
Source nam:	WELL 11 - DINO	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	382402.0	Longitude:	1212118.0
Precision:	3	Status:	AU
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	3410008	System nam:	Elk Grove Water Works
Hqname:	Not Reported	Address:	9257 Elk Grove Blvd.
City:	Elk Grove	State:	CA
Zip:	95624	Zip ext:	Not Reported
Pop serv:	23000	Connection:	6935
Area serve:	ELK GROVE		

B9
WNW
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000004041**

Well ID:	3410008-011	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 11 - DINO	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3410008-011&store_num=		
GeoTracker Data:	Not Reported		

10
NE
1/2 - 1 Mile
Higher

CA WELLS **CADWR0000009882**

Well ID:	07N06E32K001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	07N06E32K001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=07N06E32K001M&store_num=		

GeoTracker Data: Not Reported

C11
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000188086**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E07A002M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19660101	Well Depth:	364
Well Depth Units:	ft	Well Hole Depth:	364
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	10	Level reading date:	1982-07-07
Feet below surface:	108.88	Feet to sea level:	Not Reported
Note:	The site had been pumped recently.		
Level reading date:	1977-10-04	Feet below surface:	118.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-10-04	Feet below surface:	104.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-10-03	Feet below surface:	105.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-08	Feet below surface:	94.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1973-03-05	Feet below surface:	95.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-10-11	Feet below surface:	93.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-03-09	Feet below surface:	92.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1972-02-18	Feet below surface:	93.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1966-01-01	Feet below surface:	97.00
Feet to sea level:	Not Reported	Note:	Not Reported

12
North
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000039131**

State Well #:	07N06E32P001M	Station ID:	27854
Well Name:	Not Reported	Basin Name:	South American
Well Use:	Residential	Well Type:	Unknown

Well Depth:	0	Well Completion Rpt #:	Not Reported

D13
NW
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000013315**

Well ID:	3410008-004	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 04 - WEBB STREET	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3410008-004&store_num=		
GeoTracker Data:	Not Reported		

D14
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000188140**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E06H001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19580101	Well Depth:	296
Well Depth Units:	ft	Well Hole Depth:	330
Well Hole Depth Units:	ft		

C15
WSW
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000039090**

State Well #:	06N06E07A002M	Station ID:	5603
Well Name:	Not Reported	Basin Name:	South American
Well Use:	Residential	Well Type:	Unknown
Well Depth:	364	Well Completion Rpt #:	9651

16
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40000188125**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E04E002M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported

Construction Date:	19770925	Well Depth:	140
Well Depth Units:	ft	Well Hole Depth:	200
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1982-07-07
Feet below surface:	92.54	Feet to sea level:	Not Reported
Note:	The site had been pumped recently.		

Level reading date:	1977-09-25	Feet below surface:	115.00
Feet to sea level:	Not Reported	Note:	Not Reported

E17
North
1/2 - 1 Mile
Higher

CA WELLS **CADDW0000013848**

Well ID:	3410029-026	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 73 - EAST PARK	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3410029-026&store_num=		
GeoTracker Data:	Not Reported		

E18
North
1/2 - 1 Mile
Higher

CA WELLS **CAPFAS000001065**

Well ID:	3410029-026	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 73 - EAST PARK	GAMA PFAS Testing:	Yes
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=3410029-026&store_num=		
GeoTracker Data:	Not Reported		

19
SW
1/2 - 1 Mile
Higher

FED USGS **USGS40000188073**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E07H001M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	376
Well Depth Units:	ft	Well Hole Depth:	383
Well Hole Depth Units:	ft		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

20
SSE
1/2 - 1 Mile
Higher

CA WELLS **CADPR0000004182**

Well ID:	99555	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	99555	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=99555&store_num=		
GeoTracker Data:	Not Reported		

21
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000188068**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	006N006E08M002M	Type:	Well
Description:	Not Reported	HUC:	18020109
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19770101	Well Depth:	175
Well Depth Units:	ft	Well Hole Depth:	235
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1982-07-13
Feet below surface:	108.05	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1977-01-01	Feet below surface:	90.00
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
ENE
1/2 - 1 Mile

OIL_GAS **CAOG14000008034**

API #:	0406700302	Well #:	1
Well Status:	Plugged	Well Type:	Dry Hole
Lease Name:	Bartholmew	Field Name:	Any Field
Area Name:	Any Area	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
Spud Date:	02/14/1961		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95624	18	1

Federal EPA Radon Zone for SACRAMENTO County: 3

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: 95624

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	3.000 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.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX E

Preliminary Screen for Vapor Encroachment Conditions Matrix

Screen for Vapor Encroachment Conditions Matrix
MILESTONE II PROPERTY
Project No. 4640.2200088.0000

Phase I ESA Screen for Vapor Encroachment Conditions (VEC) matrix includes a (1) **Search Radius Test,** (2) **Chemicals of Concern Test (COC),** and (3) a **Critical Distance Test**[1].

(1) Search Radius Test: Are there any known or suspect contaminated sites in the primary area of concern within the corresponding search radii? (if yes, see attached Table A).

Yes (No) If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

(2) **Chemicals of Concern**[2] **Test**: Are COC likely to be present within the area of concern for those known or suspect contaminated sites identified based on the Search Distance Test?

Yes No If No, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If Yes, then:

If Yes, check all COC that apply on attached Table B.

(3) Critical Distance Test: A plume test to determine whether or not COC in the contaminated plume(s) may be within the critical distance.

(3a) Is information related to the contaminated(s) plume available (i.e. isoconcentration maps, site drawings, etc.)?
Yes No

(3b) If ***No***, then screening for a VEC is complete and no VEC *currently* exists, go to #4. If ***Yes***, then:

(3c) Is the site less than 100 feet to the nearest edge of a contaminated [non-petroleum hydrocarbon] plume(s)?
Yes No

(3d) Is the site less than 30 feet to the nearest edge of a dissolved petroleum hydrocarbon plume(s)?
Yes No

If the distance from the nearest edge of a contaminated plume to the nearest existing or planned structure on the site is less than 100 feet for non-petroleum hydrocarbon COC, or less than 30 feet for dissolved petroleum hydrocarbons, then it is presumed that a VEC *currently* exists beneath the site. If the distance from the nearest edge of the contaminated plume is greater than or equal to 100 feet for non-petroleum hydrocarbons, or 30 feet for dissolved petroleum hydrocarbon chemicals of concern, then it is presumed unlikely that a VEC *currently* exists beneath the site.

(4) Is it likely that a VEC *currently* exists beneath the site?
Yes (No) If *Yes,* then recommend performing a full scope VEC assessment according to ASTM E 2600-15.

[1] Based on guidance presented in the ASTM E 2600-15 Standard.
[2] Chemical(s) of concern (COC): See attached table for typical chemicals of concern (as presented in Appendix X6.1 of the ASTM E 2600-15 Standard).

APPENDIX I

STORM WATER QUALITY EVALUATION

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

TECHNICAL MEMORANDUM

DATE: March 6, 2024

TO: City of Elk Grove

FROM: Cindy Gwaltney, P.E.

CC: Ryan Hatheway, Taylor Morrison; Eric Crow; Scott Hartstein

SUBJECT: Storm Water Quality Evaluation for Milestone II Small Lot Vesting Tentative Map

Introduction & Overview

This Technical Memorandum (TM) is a storm water quality assessment for the Milestone II Small Lot Vesting Tentative Map. The tributary area analyzed herein for Milestone II is comprised of ±10.3 acres of residential land use within the East Elk Grove Specific Plan within the City of Elk Grove. The site is located south of Elk Grove Boulevard, north and west of Grant Line Road, and east of Waterman Road (Figure 1).

A combination of disconnected roof drains, tree planting, compost-amended soil, and bioretention will fulfill the Low Impact Development (LID) requirements. To evaluate the Low Impact Development measures, the adopted Stormwater Quality Design Manual (SQD Manual) for the Sacramento Region (July 2018) was referenced and used in this analysis.

LID & SWQ Approach

Potential stormwater quality impacts due to development of the site are managed and mitigated through LID features. LID measures treat runoff through natural physical and biological treatment processes and reduce the amount of runoff through infiltration and evapotranspiration.

Stormwater Quality Management

The State Water Resources Control Board has found that with the urbanization of an area proportionately higher runoff volume, velocity, peak flow rate, and duration from pre-development areas result. As such, the California Regional Water Quality Control Board issued the Phase 1 Municipal Separate Storm Sewer Systems (MS4) Order No. R5-2016-0040 effective October 1, 2016 as a means to manage stormwater as a resource and as an asset. The SQD Manual is intended to satisfy the regulatory requirements of the abovementioned Order. The stormwater treatment proposed for the Milestone II project is based upon the SQD Manual and utilizes the SQD Manual's LID Credit Calculation Worksheet to determine compliance.

Per the SQD Manual, the Project is considered a Priority Project. Priority Projects are required to incorporate stormwater quality control measures. Table 3-2 of the SQD Manual was used to determine the measures required for this project. Per Table 3-2 of the SQD Manual, the Project is required to provide source controls and low impact development measures. Stormwater quality treatment control measures are not required for this project, however, it is observed that stormwater quality treatment is obtained through the proposed LID features.

An LID Credit Calculation Worksheet is used to determine the credits achieved from pervious areas and proposed LID measures for the Milestone II project. A total of 100 credits are required. The LID Credit Calculation Worksheet is also used to determine the remaining volume required for SWQ treatment.

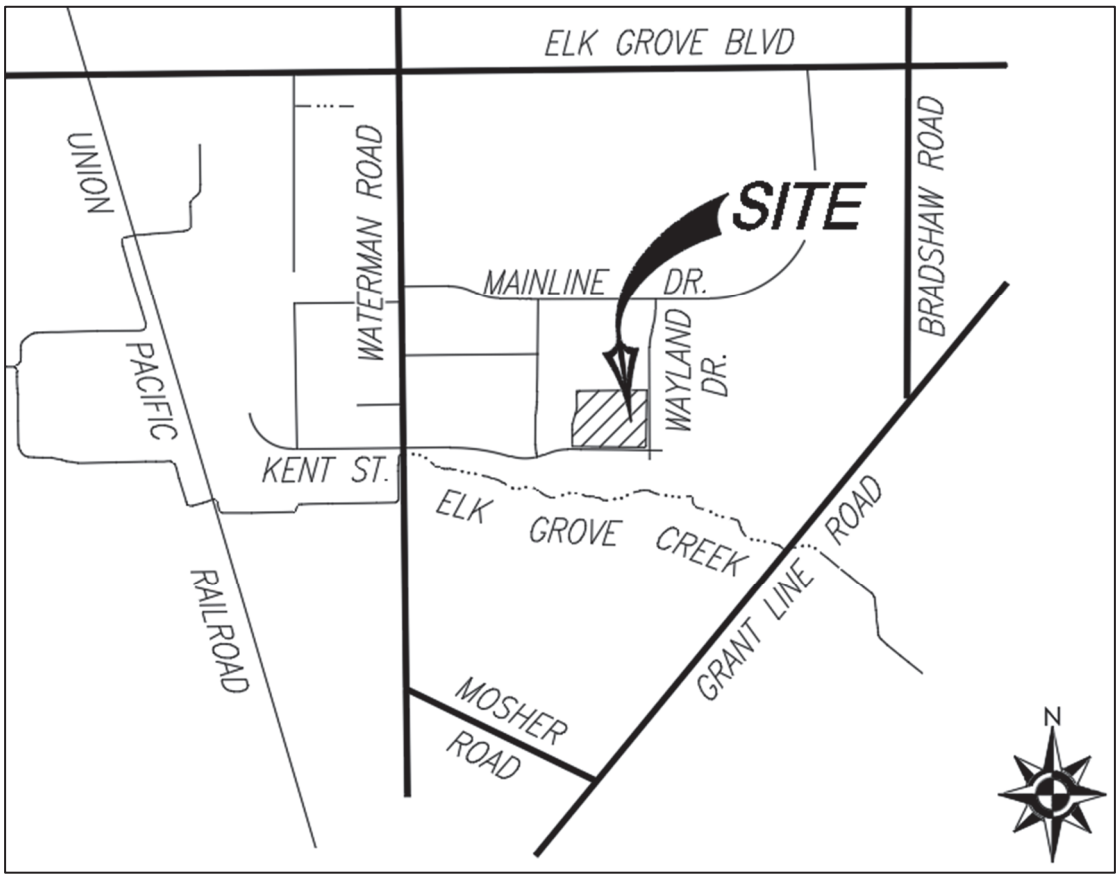


Figure 1. Project Location Map

Source Control Measures

The first line of defense in maintaining stormwater quality is to keep polluted water from commingling with clean water. This can be done using structural measures at the pollutant source. Source control measures include landscaping, efficient irrigation to reduce overspray and runoff, properly designed waste management areas, storm drain markings and signs, and other source control measures outlined in the SQD Manual.

Low Impact Development Measures

Several LID measures are proposed for the Project. These include disconnected roof drains, disconnected pavement, interceptor trees, compost-amended soil, and bioretention. These measures remove pollutants from runoff, attenuate peak flows, and reduce runoff volume. The SQD Manual describes the intent of implementing LID measures as reducing the difference between the post-project and pre-project conditions' runoff volume by 50% for the 85th percentile event. The LID Credit Calculation Worksheet is used to calculate the credits achieved from LID measures.

Disconnected Roof Drains & Disconnected Pavement

Disconnected impervious areas are hard surfaces such as roofs, driveways, patios, walkways, and sidewalks that drain directly to pervious areas such as landscape. The disconnected impervious areas for this project are roofs with disconnected roof drains and separated sidewalks. They are considered disconnected because they flow to

landscaped areas before reaching the storm drain system. As the runoff travels over the pervious area, water is infiltrated into the soil with some pollutant removal through filtration. It is expected that 50% of the roof area of the proposed houses will have disconnected roof drains. Of the sidewalks proposed, 8% are separated.

Disconnected impervious areas have the following benefits:

- decrease runoff volume,
- reduce peak flow rates, and
- encourage groundwater recharge.

Interceptor Trees

Trees will be planted throughout the site. Evergreen and deciduous trees are beneficial to water quality. A diverse selection of trees provides additional benefits and a mix of evergreen and deciduous trees are anticipated for the site. However, it is unknown at this time what variety of trees will be specified. Due to that, only 10% of the trees are assumed to be evergreen in the calculations for a more conservative approach to the application of LID measures. Planting trees throughout the project site is proposed at a rate of one tree per residential lot.

Trees, at a minimum, have the following merits:

- decrease stormwater runoff volume,
- reduce amount of pollutants to reach downstream,
- aesthetically pleasing,
- have a cooling effect through shade and evapotranspiration,
- provide habitat for birds, insects, and small mammals.

Placement and care of the trees are an important part of the design considerations for this LID measure. Trees should be located as close as practicable to impervious surfaces. It is recommended to select trees appropriate to the site and soil characteristics for the best results. All trees will require irrigation to become established and most may need irrigation during the dry season for the life of the tree.

Compost-Amended Soil

Compost-amended soil is proposed to be incorporated into residential pervious areas. It is anticipated that the impervious areas of the lot will direct runoff to the compost-amended soil areas. Amending soil increases permeability and creates voids in the soil structure through an increase in biologic activity. Permeability and storage are the keys to functioning amended soils. The voids in soils facilitate the movement of air and water through the soil. The voids also provide storage for water to be stored in during small events such as the 85th percentile event. The rate of soil amendments is proposed to be 150 square-feet per residential lot.

Compost-amended soils are particularly effective when applied to sites with a native soil that is less permeable such as hydrologic soil types “C” and “D.”

Compost-amended soil has the following benefits:

- improve soil infiltration rates,
- reduce surface runoff quantities and erosion,
- improve soil filtration capabilities and pollutant removal,
- enhance plant survival rates and health,
- and decrease the need for landscape irrigation and fertilization.

Bioretention

A bioretention facility is proposed to be located within the Project. Bioretention facilities protect and improve water quality by removing pollutants from stormwater runoff, reducing surface runoff volume, attenuating peak flows, improving air quality and reducing heat island effects, increasing groundwater recharge, and by increasing biodiversity. The key design parameters for the bioretention facility proposed herein are a 9-inch bottom layer of coarse gravel topped with 1.5-feet of bioretention soil mix and allows for 12-inches of ponding. Plants are an integral part of a bioretention facility. Guidance on appropriate plants for a bioretention facility is included in the Bioretention Planter Fact Sheet within the SQD Manual. The bioretention facility proposed herein is proposed to have an infiltrating surface area of 10,250 square-feet.

Stormwater Quality Treatment

The Milestone II project is not subject to implementation of treatment control measures. The intent of the requirement is to mitigate increased pollutant loading associated with the development of a site to the maximum extent practicable. Although not required for this site, stormwater quality treatment is achieved through the implementation of the above proposed LID elements per the LID Credit Calculation Worksheet.

Low Impact Development & Stormwater Quality Analysis

The low impact development analysis was performed in accordance with the LID and SWQ section above using the LID Credit Calculation Worksheets. Full LID compliance of 100 points was achieved for the project through the utilization of disconnected roof drains and sidewalks, trees, amended soils, and bioretention facilities. The resultant stormwater quality treatment volume required after considering LID elements is 0.0 acre-feet per the volume-based treatment portion of the LID Credit Calculation Worksheet. Table 1 below shows the total LID measures required for the Milestone II project.

Table 1. Low Impact Development Measures for Milestone II

Measure	Totals
Disconnected Roof Drains	50%
Disconnected Pavement	8%
Interceptor Trees	56
Compost-Amended Soil (sf)	8,400
Bioretention Surface Area (sf)	10,250

Conclusion

The proposed project achieves 100 LID credits and stormwater quality treatment by the implementation of LID measures. The LID measures proposed are disconnected roof drains, disconnected pavement, interceptor trees, compost-amended soils, and bioretention. These measures reduce stormwater runoff volumes for the 85th percentile event and the amount of pollutants entering receiving waters.

Limitations

This technical drainage assessment in support of the Milestone II Small Lot Vesting Tentative Map was prepared as a guide only. It has been prepared to the best of our knowledge and judgment to satisfy our understanding of its purposes. It was prepared in a manner consistent with that level of care and skill ordinarily exercised by other members of MacKay & Somps' profession practicing in the same locality, under similar conditions, and at the date

the services are provided. Our conclusions, opinions, and recommendations are based on our professional judgement and experience in the general geographic area in which the project is located. Some data may have been prepared using information from outside sources that have varying degrees of reliability. It is possible that conditions could vary between projects in the same general area. The use or misuse of this information is at the sole risk of the party using the information. MacKay & Somps makes no other representations, guarantees, or warranties, express or implied, regarding the instrument of professional services, communications (oral or written), estimates or reports, and/or opinions contained herein.

Appendix D-1: Residential Sites: Low Impact Development (LID) Credits and Treatment BMP Sizing Calculations

Name of Drainage Shed: Milestone II
Location of project: Sacramento

Fill in Blue Highlighted boxes

Step 1 - Open Space and Pervious Area Credits

Is your project within the drainage area of a common drainage plan that includes open space? If not, skip to 1 b.

1 a. Common Drainage Plan Area		acres	A_{CDP}	
Common Drainage Plan Open Space (Off-project)	0	acres	A_{OS}	**see area example below**
a. Natural storage reservoirs and drainage corridors	0	acres		
b. Buffer zones for natural water bodies	0	acres		
c. Natural areas including existing trees, other vegetation, and soil	0	acres		
d. Common landscape area/park	0	acres		
e. Regional Flood Control/Drainage basins	0	acres		
1 b. Project Drainage Shed Area (Total)	10.30	acres	A	
Project-Specific Open Space (In-project, communal)**	0.73	acres	A_{PSOS}	**see area example below**
a. Natural storage reservoirs and drainage corridors	0.00	acres		
b. Buffer zones for natural water bodies	0.00	acres		
c. Natural areas including existing trees, other vegetation, and soil	0.00	acres		
d. Landscape area/park	0.00	acres		
e. Flood Control/Drainage basins	0.73	acres		

** Doesn't include impervious areas within individual lots and surrounding individual units. That is accounted for below using Form D-1a in Step 2.

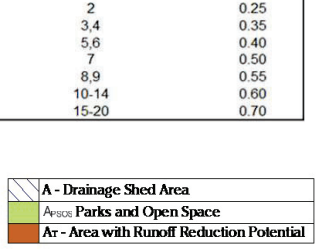
Area with Runoff Reduction Potential	$A - A_{PSOS}$ =	9.57	acres	A_T
Number of Units in A_T		56		
Number of units per acre in A_T	DU/A_T =	6	DUA	
Assumed Initial Impervious Fraction of A_T (determined using Table D-1a)		0.4	I	

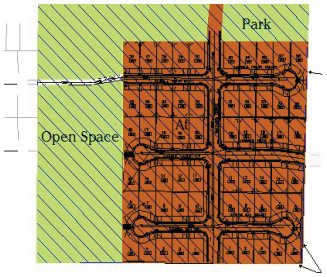
Open Space & Pervious Area LID Credit (Step 1)

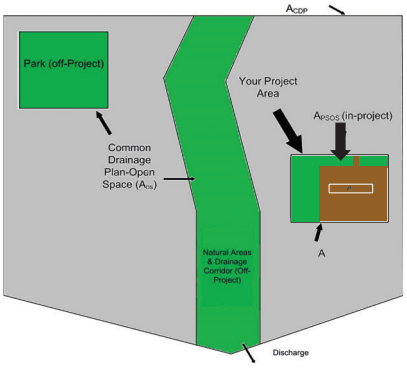
$(A_{OS}/A_{CDP}+A_{PSOS}/A)x100$ = 7 pts

Table D-1a

Dwelling units per acre	Imperviousness
1	0.17
2	0.25
3,4	0.35
5,6	0.40
7	0.50
8,9	0.55
10-14	0.60
15-20	0.70







Step 2 - Runoff Reduction Credits

Runoff Reduction Measures		Effective Area Managed (A_C)	
Disconnected Roof Drains (see Fact Sheet)	use Form D-1a for credits →	0.30	acres
Disconnected Pavement (see Fact Sheet)	use Form D-1b for credits →	0.02	acres
Interceptor Trees (see Fact Sheet)	use Form D-1c for credits →	0.03	acres
Alternative Driveway Design (see Fact Sheet)	use Form D-1d for credits →	0.00	acres
Total Effective Area Managed (Credit Area)	A_C	0.34	acres EAM

Runoff Reduction Credit (Step 2) $(A_C / A_T)*100$ = 4 pts

Form D-1a: Disconnected Roof Drains Worksheet

See Fact Sheet for more information regarding Disconnected Roof Drain credit guidelines

Effective Area Managed (A_C)

1. Determine efficiency Multiplier

Runoff is directed to a dispersal trench or dry well (Type A and B soils only)		1.00
Runoff is directed across landscaping, determine setback		
25 ft +	Use multiplier of	1.00
≥ 20 and < 25 ft	Use multiplier of	0.90
≥ 15 and < 20 ft	Use multiplier of	0.70
≥ 10 and < 15 ft	Use multiplier of	0.45
≥ 5 and < 10 ft	Use multiplier of	0.25

Efficiency Multiplier → 0.45 Box J1

2. Determine percentage of roof drains disconnected → 50.0% Box J2

3. Select project density in dwelling units per acre:

1	Use reduction factor of	0.08
2	Use reduction factor of	0.13
3,4	Use reduction factor of	0.19
5,6	Use reduction factor of	0.23
7	Use reduction factor of	0.29
8,9	Use reduction factor of	0.33
10-14	Use reduction factor of	0.37
15-20	Use reduction factor of	0.44

Reduction Factor → 0.23 Box J3

4. Determine Area Managed

Multiply Box J3 by A_T, and enter the result in Box J4: 2.2 acres Box J4

5. Multiply Boxes J1, J2 and J4, and enter 60% of the Result in Box J: 0.3 acres Box J

This is the amount of area credit to enter into the "Disconnected Roof Drains" Box of Form D-1

Form D-1b: Disconnected Pavement Worksheet

See Fact Sheet for more information regarding NDC Pavement credit guidelines

Effective Area Managed (A_C)

Divided Sidewalks

1. Determine percentage of units with divided Sidewalks: 8.0% Box K1

Multiply Box K1, A_T, and 0.04 and enter 60% of the result in Box K: 0.02 acres Box K

This is the amount of area credit to enter into the "Disconnected Pavement" Box of Form D-1

Form D-1c: Interceptor Tree Worksheet

See Fact Sheet for more information regarding Interceptor Tree credit guidelines

Effective Area Managed (A_C)

New Evergreen Trees

1. Enter number of new evergreen trees that qualify as Interceptor Trees in Box L1: 6 trees Box L1

2. Multiply Box L1 by 200 and enter result in Box L2: 1200 sq. ft. Box L2

New Deciduous Trees

3. Enter number of new deciduous trees that qualify as Interceptor Trees in Box L3: 50 trees Box L3

4. Multiply Box L3 by 100 and enter result in Box L4: 5000 sq. ft. Box L4

Existing Tree Canopy

5. Enter square footage of existing tree canopy that qualifies as Existing Tree canopy in Box L5: sq. ft. Box L5

6. Multiply Box L5 by 0.5 and enter the result in Box L6: 0 sq. ft. Box L6

Total Interceptor Tree Credits

Add Boxes L2, L4, and L6 and enter it into Box L7: 6200 sq. ft. Box L7

Divide Box L7 by 43,560 and multiply by 20% to get effective area managed and enter the result in Box L8: 0.03 acres Box L8

This is the amount of area credit to enter into the "Interceptor Trees" Box of Form D-1

Form D-1d: Alternative Driveway Design

See Fact Sheet for more information regarding Alternative Driveway Design credit guidelines

1. Select type of driveway

Pervious Driveway:	Multiplier:
Cobblestone Block P	0.40
Pervious Concrete/A	0.60
Modular Block Porous Pavement Porous Gravel	0.75
Not Directly-connected	1.00

Box M1

2. Determine percentage of units with Alternative Driveways: Box M2

4. Multiply Boxes M1, M2, A_T and 0.04, and enter the result in Box M: 0.00 acres

This is the amount of area credit to enter into the "Alternative Driveway Design" Box of Form D-1

Step 3 - Runoff Management Credits

Capture and Use Credits

Impervious Area Managed by Rain barrels, Cisterns, and automatically-emptied systems

(see Fact Sheet) _____ enter gallons, for simple rain barrels — 0.00 acres

Automated-Control Capture and Use System

(see Fact Sheet, then enter impervious area managed by the system) — 0.00 acres

Bioretention/Infiltration Credits

Impervious Area Managed by Bioretention BMPs

(see Fact Sheet)

Bioretention Area 10,250 sq ft
Subdrain Elevation 9 inches
Ponding Depth, inches 12.0 inches — 3.51 acres

Impervious Area Managed by Infiltration BMPs

(see Fact Sheet)

Drawdown Time, hrs _____ drawdown_hrs_inf
Soil Infiltration Rate, in/hr _____ soil_inf_rate

Sizing Option 1: Capture Volume, acre-ft _____ capture_vol_inf — 0.00 acres

Sizing Option 2: Infiltration BMP surface area, sq ft _____ soil_surface_area — 0.00 acres

Basin or trench? Basin — approximate BMP depth 0.00 ft

Impervious Area Managed by Amended Soil or Mulch Beds

(see Fact Sheet) Mulched Infiltration Area, sq ft 8,400 mulch_area — 0.77 acres

Total Effective Area Managed by Capture-and-Use/Bioretention/Infiltration BMPs — 4.28 A_{LIDc}

Runoff Management Credit (Step 3) A_{LIDC}/A_T*200 = 89.5 pts

Total LID Credits (Step 1+2+3) LID compliant, check for treatment sizing in Step 4 — 100.1

Does project require hydromodification management? If yes, proceed to using SacHM.

Adjusted Area for Flow-Based, Non-LID Treatment $A_T - A_C - A_{LIDC}$ = 4.95 A_{AT}

Adjusted Impervious Fraction of A for Volume-Based, Non-LID Treatment $(A_T*I-A_C-A_{LIDC}) / A$ = 0.000 I_A

STOP: No additional treatment needed

Step 4a Treatment - Flow-Based (Rational Method)

Form D-1e

Calculate treatment flow (cfs): Flow = Runoff Coefficient x Rainfall Intensity x Adjusted Treatment Area

Determine C Factor using Table D-1b — C

Determine i using Table D-1c (Rainfall Intensity) — 0.18 — i

A_{AT} from Step 2 — 4.95 — A_{AT}

Flow = C * i * A_{AT} — 0.00 cfs

TABLE D-1b

Development Type	Runoff Coefficient (Rational), C
Single-family areas	0.50
Multi-units, detached	0.60
Apartment dwelling areas	0.70
Multi-units, attached	0.75
User Specified	0.00

Table D-1c

Rainfall Intensity		
Roseville	i = 0.20	in/hr
Sacramento	i = 0.18	in/hr
Folsom	i = 0.20	in/hr

Step 4b Treatment - Volume-Based (ASCE-WEF)

Calculate water quality volume (Acre-Feet): WQV = Area x Maximized Detention Volume (P_0)

Obtain A from Step 1 — 10.30 — A — _____ hrs — Specified Draw Down time

Obtain P_0: Maximized Detention Volume from figures E-1 to 4 in Appendix E of this manual using I_A from Step 2. E- 0.00 — P_0

Calculate treatment volume (acre-ft):

Treatment volume = A x (P_0 / 12) — 0.00 Acre-Feet

v06232012

APPENDIX J

TRANSPORTATION IMPACT ANALYSIS AND VMT ANALYSIS

FEHR PEERS

Memorandum

Date: May 19, 2025

To: Ryan Hathaway, Taylor Morrison Services Inc.

From: Jonathan Murillo, Fehr & Peers

Subject: **Milestone II Rezone – Transportation Impact Analysis and VMT Analysis**

SA24-0271

Fehr & Peers completed a vehicle miles of travel (VMT) analysis of the Milestone II Map and Rezone project. The purpose of the VMT analysis is to support the application for entitlements of the Project by determining if the Project would result in new significant impacts or a substantial increase in the severity of impacts relative to development of the Project site based on the land use designation of the City of Elk Grove General Plan. This memorandum outlines SB 743, the proposed Project, the analysis methodology, the evaluation criteria, and presents the VMT analysis.

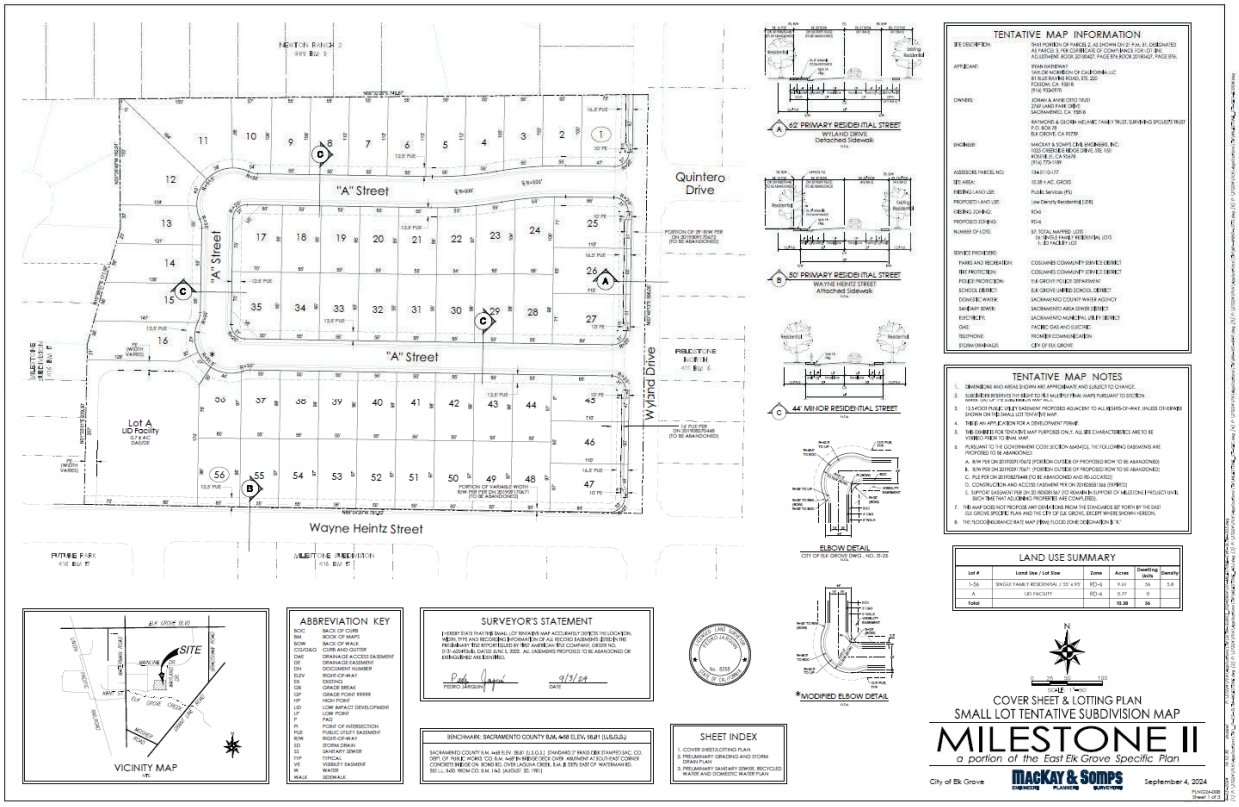
SB 743

SB 743 (Stats. 2013, ch. 386) resulted in several statewide CEQA changes. It required the Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of a residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised CEQA Guidelines that implement this legislation became effective on December 28, 2018, and state that vehicle level of service (LOS) and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts.

Proposed Project

The Project is located approximately 2,000 feet east of Waterman Road bordered by Wayne Heintz Street and Wyland Drive. The Project site is approximately 10.3 acres and consists of parcel 134-0110-177. Project access would be provided by two entrances on Wyland Drive and one on Wayne Heintz Street. **Figure 1** shows the Project location.

Figure 1 – Milestone Map and Rezone Project



The Project site is undeveloped with no existing land use on the site. Adjacent existing uses include single family residential land use. The City of Elk Grove General Plan designates the Project area as Public Services (P/QP).

The Project consists of a Rezone from Public Services (P/QP) with an Elementary School (ES-1) to Low Density Residential (RD-6) and a Subdivision Map containing 56 Single Family Lots and a Detention basin.

VMT Analysis Methodology

The estimation of the Project's VMT performance follows the methods documented in *EGSIM20 – Model Development Report and VMT Methodology* (October 5, 2022).

VMT Performance Metrics

The EGSIM20 Travel Demand Model is a tool for implementing the General Plan (i.e., like General Plan policy and actions). Consistent with CEQA Guidelines, § 15064.7, the City selected VMT per service population as the preferred performance metric, for implementing its VMT policy. Of the performance metrics considered, VMT per service population was the most intuitive to the decision makers and supported implementation of the General Plan by incentivizing development in the City's core and not in sensitive resource areas that the community values. A key emphasis of the General Plan was to plan and develop a better job-to-housing balance so residents can work where they live, and to support more

mixed-use development to reduce the need to travel by car for goods and services. The VMT per service population metric is useful since it captures these trip reduction benefits and accounts for travel from the full range of users and not just residents or just workers. In addition, the City of Elk Grove uses VMT performance targets by General Plan land use category and VMT limits for the City and study areas, which is an additional step to ensure consistency with the General Plan.

VMT Efficiency Components - Definitions

Trips

Trip is defined as a travel between two points using a certain mode of travel. In an activity-based model, individuals make multiple trips per day. The model tracks each trip, including their characteristics (e.g., trip length, purpose, time, location etc.). The model includes four major types of trips that are included in various VMT calculations:

- Trips by SACOG residents to destinations within the SACOG region. These are known as internal-internal, or II trips. These trips are modeled by the DAYSIM submodel.
- Trips by SACOG residents to destinations outside the SACOG region, known as internal-external, or IX trips. These trips are modeled by the IX-XI submodel.
- Trips by non-SACOG residents to destinations in the SACOG region, known as external-internal, or XI trips. These trips are modeled by the IX-XI submodel.
- Trips that do not stop within the SACOG region are known as external-external (XX) or through trips. These are generally not included in VMT efficiency calculations but are typically included in VMT estimates used for emissions analysis. They offer the full picture of VMT within a certain region.

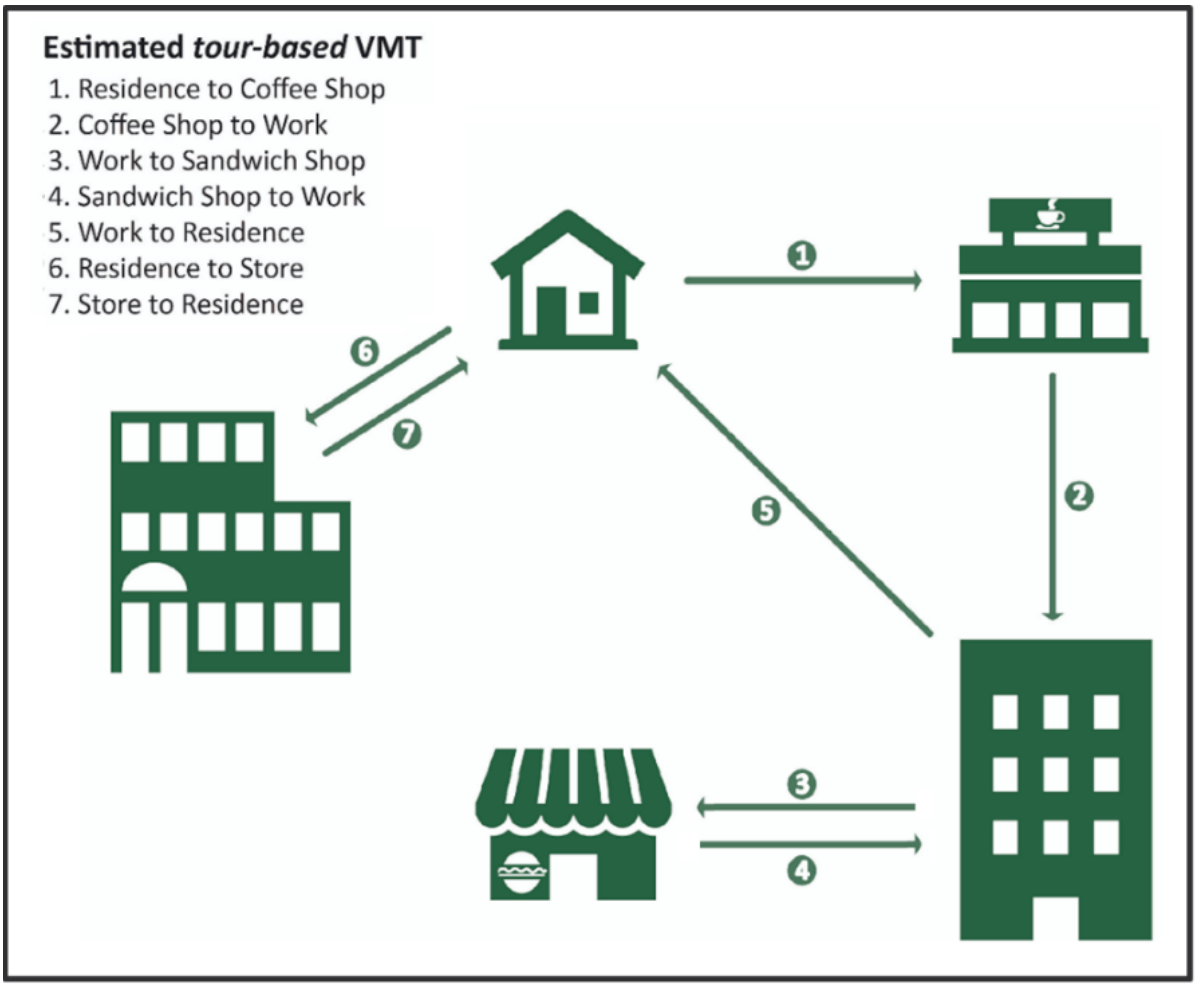
Tours

A tour is defined as a chain of trips that, typically occurring in sequence, start and end at a specific location. By definition, tours in activity-based models refer to chain of trips that begin and end at a home location. Any trip-chaining that does not begin or end at home location are called subtours.

Travel Diary

Activity-based models create a travel diary for each individual in the model area. **Figure 2** shows a travel diary of a typical day for a household member within the SACOG region. Each leg of the arrow indicates an individual trip. This example includes 7 trips and 2 tours between home, coffee shop, work, and store location. Work location can be Office/Industrial/Retail/Public facilities etc. **Trips 1-2-5** is a home-based tour. **Trip 3-4** is a work-based subtour.

Figure 2: EGSIM20 Example Travel Diary



Full Accounting

Full Accounting of VMT accounts for vehicle travel that occurs outside of the model area. This is done in the EGSIM20 by using IX-XI trips and average trip distance outside SACOG region. The average trip length outside of the SACOG region was calculated using Replica (Spring 2019) mobility data.

Household Generated VMT

Household Generated VMT applies to all residential land uses. This includes All VMT from vehicle tours (both work/commute vehicle tours and non-work vehicle tours) that start and end at residential units. **Tours *1-2-5* and *6-7*** in **Figure 2** are examples of such tours. Trips made by a household resident that do not begin or end at home (e.g., midday travel from a worksite for lunch or personal business) are also included in the household generated VMT estimates. **Subtour *3-4*** from **Figure 2** is an example of non-home-based tour.

Employment Center Generated Work Tour VMT

Employment Center Generated Work Tour VMT applies to office/business professional and industrial employment land uses. This VMT includes all work/commute vehicle tours that start and end at the worksite (including intermediate stops). **Tour *1-2-5*** in **Figure 2** is an example of a commute tour. Work-based subtours tours that start and end at employment locations are also included. **Tour *3-4*** in **Figure 2** is an example of work based sub-tour.

Retail/Public facilities Generated VMT

Retail/Public facilities Generated VMT applies to retail or public facilities projects. This VMT includes all work/commute vehicle tours that start and end at the retail/public facility site (including intermediate stops). **Tour *1-2-5*** in **Figure 2** is an example of a commute tour. Work based subtours tours that start and end at employment location are also included. **Tour *3-4*** in **Figure 2** is an example of work based sub-tour. VMT associated with retail/public facility uses that are not commute tours are also included. **Tour *6-7*** in **Figure 2** is an example of "Other" tours. Other tours are only included for the following trip purposes only:

- Shopping
- Meal
- Personal Business/ Medical

VMT Efficiency by Land Use Category

VMT Efficiency by Land Use Category is the ratio of total VMT for each parcel containing a specific land use designation and total service population for that parcel. For example, sum all the VMT from parcels designated as "Low density household" within City of Elk Grove and divide it by the total service population within the City for the same parcels to get VMT per service population for the Low-Density Household category.

VMT Efficiency Metric Calculation Methodology

Internal-Internal (II) VMT for EGSIM20 is calculated by using the trip and tour diaries created through the activity generation portion of the model (DaySim) and added to IX-XI VMT, calculated using additional processes outside of DaySIM. The main steps in calculating the VMT efficiency metrics are discussed below.

Run Scripts

When the EGSIM20 run completes, it produces the *_trips.tsv* file, which is a table of all internal-internal trips. However, because the trip distance in the original table is estimated based on the congested speed prior to the last global iteration, the user must run a Cube Voyage script[1], to estimate the distance based on the final iteration network congestion. The output of this supplementary Cube script is a CSV file, "_trip_1_1.csv," which has the same table as _trips.tsv but with the following attributes added to each trip:

- timeau – Updated travel time by auto
- distau – Updated trip distance by auto
- distcong – Congested distance

After running the first script, another Cube Voyager script[1] is run to compute VMT and other variables for both IX-XI and commercial trips. The following files are the output of the second script:

- *ixxi_taz.dbf* – This includes trips and VMT on Gateways for each TAZ.
- *cveh_taz.dbf* – This includes commercial vehicle trips for each TAZ.

Internal-Internal VMT

Using the trips_1_1.csv file, each vehicle trip's VMT is calculated using the following formulas. Factors are applied to the trip distance based on trip MODE.

- If MODE = 3 (DA), $VMT = distau$
- If MODE = 4 (HOV2), $VMT = distau * 0.5$
- If MODE = 5 (HOVE3+), $VMT = distau * 0.3$

Where,

distau = updated trip distance by auto
DA = Drive Alone
HOV2 = High Occupancy Vehicle or Shared Drive 2
HOV3+ = High Occupancy Vehicle or Shared Drive 3 or more

[1] SACOG, VMT Computation Procedures – DRAFT, https://www.sacog.org/sites/main/files/file-attachments/draft_sacsim_vmt_calculation_procedures_0.pdf?1601488966

IX-XI VMT by TAZ

SACOG methodology for calculating VMT outside the region[2] were followed for this process. The file Outside_sacog_vmt_estimation_steps_0_new_method.xlsx excel tool created by SACOG[3] was modified to incorporate new TAZ, land use, and external worker data. The output of this tool includes the following:

- Total IX-XI VMT by TAZ for external household generated VMT. This is completed by multiplying all external trips for each TAZ with the average estimated trip distance outside the region, which was estimated using Replica (Spring 2019) mobility data.
- Household generated IX-XI VMT or External Travel by residents for each TAZ is calculated using the following formula:

$$IXXI_{VMT_{RES}} = \left(IX_{VMT_I} + XI_{VMT_I}\right) * \left(\frac{HH}{(1 + HH + 1.1 * (EMPTOT - FOOD - RET - 0.25 * SVC))}\right.$$

Where:

IXXI_{VMT_RES} = internal-external VMT made by SACOG residents
IX_{VMT_I} = VMT originating at zone I
IX_{VMT_I} = VMT ending at zone I
HH = Households in zone I
EMPTOT = Jobs in zone I
FOOD = Jobs in Food sector in zone I
RET = Retail jobs in zone I
SVC = Service Jobs in zone I

- Work tour IX-XI VMT by TAZ for external employment/retail VMT. This is completed by multiplying the vehicle trips by external worker for each TAZ with the average estimated trip distance outside the region using Replica (Spring 2019) mobility data. Vehicle trips by external worker are calculated using the following formula.

$$Vehicle\ Trips\ by\ External\ Worker\ =\ External\ Worker\ *\ 1.7\ *\ (0.89 + 0.11/2.34)$$

Where:

1.7 – Person to Vehicle Trip Factor
0.89 – drive alone trip mode share
0.11 – shared ride trip mode share
2.34- shared ride vehicle occupancy factor

[2] SACOG, SACOG Outside the Region VMT Estimation, https://www.sacog.org/sites/main/files/file-attachments/draft_vmt_ixxi_documentation_0.pdf?1622243676
[3] https://www.sacog.org/sites/main/files/file-attachments/outside_sacog_vmt_estimation_steps_0_0.xlsx?1626798833

Household Generated VMT by Parcel

All household generated II VMT are summed for each parcel as described above.

All household generated IX-XI VMT or external travel by residents for each TAZ (as described above) are divided by total population of each TAZ to calculate Household generated IX-XI VMT per person per TAZ.

- Household generated IX-XI VMT for each parcel is then calculated multiplying household size for the parcel and Household generated IX-XI VMT rate for the TAZ that the parcel belongs to.
- Finally, the II and IX-XI VMT for each parcel is summed to get total household generated VMT.

Employment Center Generated Work Tour

- VMT from II work tours as described above are summed for each employment parcel.
- Work tour IX-XI or VMT by external workers (as described above) for each TAZ is divided by external employees for respective TAZ. This results in the rate of IX-XI VMT by external workers for each TAZ.
- Employment center generated IX-XI work VMT for each parcel is then calculated multiplying the number of employees and rate of IX-XI VMT by external workers for the respective TAZ that the parcel belongs to.
- Finally, the II and IX-XI VMT for each employment center parcel is summed to get total employment center generated VMT.

Retail/Public facilities Generated VMT

VMT from II tours as described above are summed for each retail or public facilities parcel.

Work tour IX-XI or VMT by external workers (as described above) for each TAZ is divided by external employees for respective TAZ. This results in the rate of IX-XI VMT by external workers for each TAZ.

Retail/public facilities generated IX-XI work VMT for each parcel is then calculated multiplying number of employees and rate of IX-XI VMT by external workers for respective TAZ that the parcel belongs to.

Finally, the II and IX-XI VMT for each retail/public facility parcel is summed to get total retail/public facilities generated VMT.

Table 1 compares the three major types of VMT metrics calculated using EGSIM20.

Table 1: VMT Methodology Comparison by Project Type

VMT Analysis		Residential Projects	Office/ Industrial Projects	Retail/ Public Facilities Projects
Analysis Methodology		Household generated VMT per service population	Work Tour VMT per service population (1)	Retail/Public facilities Generated VMT per service population
HBW (2)	1-2-5	Y	Y	Y
HBO (3)	6-7	Y	N	Y(8)
NHB (4)	3-4	Y	Y	Y
IX-XI (5)	External travel by residents	Y	N	N
	Travel by external workers	N	Y	Y
XX (6)		N	N	N
Commercial Vehicle (7)		N	N	N

Notes
1 - Service Population = Residents + Employees + Students
2 - HBW = Home-based work tour, includes intermediate stops
3 - HBO = Home-based other tour (shopping, personal business, medical, school, recreational etc.), includes intermediate stops
4 - NHB = Non-Home-based tour (tour that begin and end at a non-home location i.e., subtours), includes intermediate stops
5 - IX-XI = Internal-External / External-Internal,
External work travel by residents who reside within SACOG but work outside the region.
Travel by workers that reside outside SACOG region but work within the region.
6 - XX = External-External Travel, Trips that do not have any stops within SACOG region
7 - Commercial Vehicle = Trips by commercial vehicles (small-large trucks)
8 - Only includes Customer/Visitor Tour (Tours at employment location by people who do not work there). The following trip purposes are included:
-- Personal Business/ Medical
-- Shop
-- Meal

VMT Per Service Population by Land Use Type

All the VMT generated by the three types of projects are summed to get total VMT by each parcel. Then the total VMT is divided by service population to get VMT per service population or each parcel. The data is then summarized by land use type to get the VMT per service population by LU type.

VMT Threshold Estimation

All the VMT generated by the three types of projects are summed to get total VMT by each parcel. Then the total VMT is divided by service population to get VMT per service population or each parcel. The data is then summarized by land use type to get the VMT per service population by LU type.

The EGSIM20 Travel Demand Model is a tool for implementing the General Plan (i.e., like General Plan policy and actions), like Policy MOB-1-1. Consistent with CEQA Guidelines, § 15064.7, the City selected VMT per service population as the preferred performance metric, for implementing its VMT policy. The

VMT per service population metric is useful since it captures these trip reduction benefits and accounts for travel from the full range of users and not just residents or just workers.

With the development of EGSIM20 and associated calibration and revalidation, the VMT performance measures were re-estimated to provide a consistent basis of evaluating the Project, a key requirement of SB 743, to ensure that the effects of the Project are accurately identified. **Table 2** and **Table 3** summarize the VMT limits at General Plan Buildout (i.e., for the City limits and study areas) and VMT by General Plan land use category, respectively, using the VMT calculation methodology outlined above.

Table 2: Daily VMT Limit by Study Area (Re-estimated)

City Limit and Study Areas	VMT Limit
City Limit	8,072,194
North Study Area	27,261
East Study Area	587,948
South Study Area	1,541,757
West Study Area	776,408

Source: Fehr & Peers, 2025

Table 3: Daily VMT Per Service Population by Land Use Category (Re-estimated)

Land Use Designation	VMT Per Service Population	
	Base Year (2020)	VMT Limit[1]
Commercial and Employment		
Community Commercial (CC)	31.4	26.7
Regional Commercial (RC)	31.7	27.0
Employment Center (EC)	23.8	20.2
Light Industrial/Flex (LI/FX)		22.5
Light Industrial (LI)	26.4	22.5
Heavy Industrial (HI)	31.2	26.5
Mixed Use		
Village Center Mixed Use (VCMU)	-	19.7
Residential Mixed Use (RMU)	-	18.8
Transect		
General Neighborhood Residential (T3-R)	-	21.2
Neighborhood Center Low (T3)	-	20.4
Neighborhood Center Medium (T4)	-	19.8
Neighborhood Center High (T5)	-	16.3
Public/Quasi Public and Open Space		
Parks and Open Space(P/OS)	-	NA[2]
Resource Management and Conservations (RMC)	-	NA[2]
Public Services (PS)	-	-
Residential		
Rural Residential (RR)	29.6	25.2
Estate Residential (ER)	24.2	20.6
Low Density Residential (LDR)	22.7	19.3
Medium Density Residential (MDR)	21.0	17.9
High Density Residential (HDR)	20.8	17.7
Other		
Agriculture (AG)	-	-

Notes

1 - VMT Limit is 85% of average base year VMT per service population for parcels with land use designation or VMT per service population at buildout for land use designation that do not exist in the base year.

2 - These land use designations are not anticipated to produce substantial VMT, as they have no residents and few to not employees.

Source: Fehr & Peers, 2025

The analysis of Project vehicle miles traveled (VMT), relative to the re-estimated VMT limits and VMT by General Plan land use category presented in **Table 2** and **Table 3** above, is discussed above.

VMT Screening

The proposed Project does not qualify for VMT screening based on review of low VMT generating traffic analysis zones.

VMT by General Plan Land Use Category

Table 4 compares the Project's VMT per service population (i.e., employees, students, patients, and visitors) to the City's VMT limit for the Low Density Residential land use (which incorporates a 15% reduction in total VMT from the 2020 baseline). As shown in **Table 4**, the Project would perform equal to the established VMT limit for Low Density Residential land use.

Table 4: VMT by Land Use Designation Limits - Buildout Conditions

General Plan Land Use Designation	VMT Per Service Population		Limit Exceeded
	Limit	Project	
Low Density Residential (LDR)	19.3	19.3	No

Source: Fehr & Peers, 2025

VMT by Study Area Limits

Table 5 compares the City Limit total VMT limit to the City Limit VMT limit with buildout of the proposed Project. As shown in **Table 5**, the addition of the Project would not cause cumulative VMT to exceed the established City Limit Total VMT.

Table 5: Study Area VMT Limit - Buildout Conditions

Study Area	Total VMT		Limit Exceeded
	Limit	Project	
City Limit	8,072,194	8,058,238	No

Source: Fehr & Peers, 2025

Other CEQA Considerations

The following discusses the conditions of bicycle facilities, pedestrian facilities, transit service, and roadway design targets with the addition of the proposed Project.

Table 6 compares the daily, AM peak hour, and PM peak hour trip generation with the Elk Grove General Plan and the proposed Project land uses. As shown, the proposed Project would generate fewer daily, AM peak hour, and PM peak hour trips.

Table 6: Trip Generation Comparison

Lane Use		Units	Quantity	Trip Generation[1]		
				Daily	Peak Hour	
					AM	PM
Elk Grove General Plan Buildout	Elementary School (ES-1)[2]	Students	780	1,474	523	133
Proposed Project	Low Density Residential (RD-5)[3]	Dwelling Units	56	602	40	59
Difference (Proposed Project – Elk Grove General Plan)				**-872**	**-483**	**-74**

1 Trip Generation Manual, 11th Edition
2 ITE Code 520 – Elementary School. Number of students based on similar size sites in City of Elk Grove.
3 ITE Code 210 – Single Family Detached Housing

Source: Fehr & Peers, 2025

Bicycle Facilities

Bicycle LTS refers to the comfort associated with roadways, or the mental ease people experience riding on them. Metrics for bicycling LTS were developed at the Mineta Transportation Institute (MTI) and published in the report "Low-Stress Bicycling and Network Connectivity."4 The criteria establish a "weakest link" approach, as roadways are classified based on their segments with the highest level of traffic stress, assuming that only those that are comfortable riding under the higher stress would travel on that road. Factors influencing LTS include:

- Number of travel lanes
- Speed of traffic
- Number of vehicles
- Presence of bike lanes
- Width of bike lanes
- Presence of physical barrier

Bicycle riders vary in experience, skill, ability, and confidence. As such, they rely on the bikeway system to cater to their specific needs and abilities. Some cyclists are more comfortable riding in traffic and value

4 Mekuria, Maaza C., Peter G. Furth, and Hilary Nixon, (2012). *Low-Stress Bicycling and Network Connectivity*. San Jose, California: Mineta Transportation Institute.

bikeways and routes that are direct and limit unnecessary delay. They more comfortably utilize facilities that share the roadway with automobiles or have limited bicycle infrastructure. People with limited bicycling confidence and lower or developing skill levels such as children and older adult riders may desire more separation from traffic to feel comfortable enough to ride. Different bicycle types also require more space in bicycle facilities, such as trailers for children or cargo or adult tricycles. For these reasons, facilities should be designed to accommodate the lowest skill levels, especially in heavily traveled areas.

Recent research has correlated these different bicycle riders with the level of "traffic stress" they are willing to experience while cycling. Bicycle LTS criteria span from 1 to 4, with 1 being the least stressful and 4 being the most stressful:

- **LTS 1:** Most children and elderly riders can tolerate this level of stress and feel safe and comfortable. LTS 1 roadways typically require more separation from traffic.
- **LTS 2:** This is the highest level of stress that the mainstream adult population will tolerate while still feeling safe.
- **LTS 3:** Bicyclists who are considered "enthused and confident" but still prefer having their own dedicated space for riding will tolerate this level of stress and feel safe while bicycling.
- **LTS 4:** For bicyclists, this is tolerated only by those characterized as "strong and fearless," which comprises a small percentage of the population. These roadways have high speed limits, multiple travel lanes, limited or non-existent bike lanes and signage, and large distances to cross at intersections.

Class II bike lanes (on-street with signage and striping) are provided in both directions on Waterman Road. Class III bike routes are provided along the full length of Mainline Drive from Waterman Road to Elk Grove Blvd. The City of Elk Grove Bicycle, Pedestrian, & Trails Master Plan (May 2021) identifies Waterman Road as Bicycle LTS 3. The plan also identifies Mainline Drive as Bicycle LTS 2. With lower trip generation and VMT, the proposed Project would not worsen the Bicycle LTS.

Wayne Heintz Street and Wyland Drive presently do not have bicycle facilities. However when applying the Bicycle LTS methodology for those two streets adjacent to the project they would have a Bicycle LTS 3. With lower trip generation and VMT, the proposed Project would not worsen the Bicycle LTS.

Pedestrian Facilities

The Pedestrian Streestcore+ Level of Traffic Stress (LTS) refers to the pedestrian comfort associated with a roadway or intersection.

The Pedestrian LTS methodology builds on Mekuria, Furth, and Nixon's 2012 Low Stress Bicycling and Network Connectivity report and LTS methodology with a corresponding index for pedestrian comfort. A tool to evaluate Pedestrian and Bicycle LTS called Streetscore+ was developed by Fehr & Peers and includes recommended parameters for the pedestrian environment provided by the NACTO Urban Streets Design Guide (USDG) and additional considerations of comfort informed by practitioner and best practice experience. Roadway segments and intersection approaches receive individual scores based on different

considerations. The following factors are considered in developing the Pedestrian Streetscore+ for roadways and intersections:

Roadways	**Intersections**
Usable sidewalk space	Crossing distance
Driveways	Accessibility
Pedestrian-scale lighting	Channelized right-turns
Street trees and landscaping	Leading pedestrian intervals (LPIs) and pedestrian scrambles
Speed	
Sidewalk quality	
Number of travel lanes	
Heavy vehicle volumes	
Crosswalk frequency	

The Pedestrian Streetscore+ uses a scale that ranges from 1 to 4:

- **Streetscore+ 1:** Highly comfortable, pedestrian-friendly, and easily navigable for pedestrians of all ages and abilities, including seniors or school-aged children walking unaccompanied to school. These streets provide an ideal "pedestrian-friendly" environment.
- **Streetscore+ 2:** Generally comfortable for many pedestrians, but parents may not feel comfortable with children walking alone. Seniors may have concerns about the walking environment and take more caution. These streets may be part of a "pedestrian-friendly" environment where it intersects with a more auto-oriented roadway or other environmental constraints.
- **Streetscore+ 3:** Walking is uncomfortable but possible. Minimum sidewalk and crossing facilities may be present, but barriers are also present that make the walking experience uninviting and uncomfortable.
- **Streetscore+ 4:** Walking is a barrier and is very uncomfortable or even impossible. Streets have limited or no accommodation for pedestrians and are inhospitable and possibly unsafe environment for pedestrians.

Pedestrian facilities are provided along the western side of Waterman Road from Wayne Heintz Road to Elk Grove Blvd. Sidewalks are present on both sides of Waterman Road from Charolais Way through Elk Grove Blvd. The sidewalks on the eastern portion of Waterman Road are buffered from the roadway by landscape planters. Additionally, there is the Elk Grove Walking and Bicycling Trail 1,000 ft west of the project, allowing for pedestrian access. Along the project frontage of Wayne Heintz Street and Wyland Road there are sidewalks present on both sides of the street. These streets connect to the Elk Grove Walking and Bicycling Trail near the project site.

Table 7 summarizes pedestrian LTS with the addition of the proposed Project. As shown in **Table 7**, the addition of the proposed Project will not degrade the Pedestrian Streetscore LTS.

Table 7: Pedestrian Streetscore LTS

Roadway Segment	LTS	
	Current Conditions	With Project
Waterman Road	3	3
Wayne Heintz Street	2	2
Wyland Drive	2	2

Source: Fehr & Peers, 2025

Transit Service

Transit service within the study area is provided by Regional Transit. Currently, the closest service to the proposed Project is Commuter Route E16, Local Routes E115, and Local Route E116. The nearest stop from the project site is on Elk Grove Blvd east of Mainline Road, one mile north of the project site. The local routes run on Elk Grove Blvd to Bruceville Road (E116) and Bond Road to Elk Grove Florin Road to Power Inn Road (E115) with service to/from Cosumnes River College. Route E16 runs along Elk Grove Blvd west to/from SR 99 and serves Downtown Sacramento.

Elk Grove Transit (e-tran), which is currently operated by Sacramento Regional Transit, receives funding from state sources (Transit Development Act [TDA] funds), federal sources (Federal Transportation Administration), and through fare collection. State and federal funds are generally allocated based on population, with a portion of TDA funds derived from a ¼-cent general sales tax and a sales tax on diesel fuel. Therefore, development of the proposed Project would increase funding for transit, through these sources, because of population growth.

The Federal Transit Administration maintains a database of transit system performance. The City of Elk Grove 2021 Annual Agency Profile[5] identifies that local bus service had unlinked trips per vehicle revenue hour of 2.2, or about 2 passengers per hour. Generally, this level of performance is indicative of low demand and productivity. Routes performing at this level would have excess seated and standing capacity. Consequently, the proposed Project would not create demand for public transit services above the crush load capacity of the transit system.

Roadways

General Plan Policy MOB-1-4 includes performance targets for intersections and roadways. The objective of the policy is to balance the effectiveness of design requirements to achieve the targets with the character of the surrounding area, cost, and maintenance. The General Plan Transportation Network Diagram reflects the implementation of roadway performance targets at General Plan Buildout.

[5] https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2021/90205.pdf

Waterman Road is two lanes from Grant Line Road to Wayne Heintz Road, and three lanes from Wayne Heintz Road through Elk Grove Blvd. Waterman Road is planned to be four lanes from Grant Line Road through Elk Grove Blvd and being two lanes north of Elk Grove Blvd in the General Plan Transportation Network Diagram (Figure 3-6).

As outlined above, the proposed Project would generate fewer daily, AM peak hour, and PM peak hour trips than those estimated under the General Plan Elementary School (ES-1) land use designation. As a result, the Project would not increase traffic to a level that would necessitate reclassification of Waterman Road or the adjacent roadways, including Wayne Heintz Street and Wyland Road, to accommodate buildout of the General Plan.