CITY OF ELK GROVE
DEVELOPMENT SERVICES DEPARTMENT

Sheldon Grove Project (PLNG20-025)

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

March 2021

RANEY PLANNING & MANAGEMENT, INC.
20 years
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INITIAL STUDY

March 2021

A. BACKGROUND

1. Project Title: Sheldon Grove Project (PLNG20-025)

2. Lead Agency Name and Address: City of Elk Grove
Development Services, 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: Northeast of Power Inn Road/Sheldon Road Intersection
Elk Grove, CA 95758

5. Project Sponsor's Name and Address: Angelo G. Tsakopoulos
1435 River Park Drive, Suite 500
Sacramento, CA, 95815
(916) 972-7000

6. Existing General Plan Designation: Community Commercial (CC)

7. Existing Zoning Designation: General Commercial (GC)

8. Proposed General Plan Designation: Low Density Residential (LDR)

9. Proposed Zoning Designation: Low-Density Residential (RD-7)

10. Required Approvals from Other Public Agencies: None

11. Surrounding Land Uses and Setting:

Currently, the Project site is vacant and undeveloped. The site consists primarily of ruderal grasses which are regularly disked. The Project site is bounded by Sheldon Road to the south and Power Inn Road to the west. Surrounding development includes single-family residential to the north; single-family residential development and Consumes Community Services District (CSD) Fire Station 76 to the east; single-family residential development to the west, across Power Inn Road; and a retirement community (Camden Springs Gracious Retirement Living) and Shortline Lake to the south, across Sheldon Road.

12. Project Description Summary:

The Sheldon Grove Project (Project) (PLNG20-025) would include subdivision of the Project site into 123 single-family residential lots and three landscape corridor lots located along the Project site frontages at Sheldon Road and Power Inn Road, along with

construction of necessary utility improvements to serve the proposed residences. The Project would also include improvements to Sheldon Road, wherein the median would be reconstructed to provide a left-turn lane. The Project would be accessible by F Street from Sheldon Road and by A Street from Power Inn Road. Implementation of the Project would require a General Plan Amendment, Rezone, Tentative Subdivision Map, and Subdivision Design Review with a Deviation for a reduced landscape corridor of 21 feet on Power Inn Road.

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 Section 21080.3.1), a Project notification letter was distributed on September 21, 2020 to local tribes that had requested notification. Requests for consultation were not received within the consultation period. The Shingle Springs Band of Miwok Indians requested notification and updates throughout the planning process. None of the contacted tribes requested formal consultation pursuant to AB 52.

B. SOURCES

The following documents are referenced information sources used for the purposes of this Initial Study/Mitigated Negative Declaration (IS/MND):

1. Au Clair Consulting, Inc. *Drainage Study Sheldon Grove Subdivision Elk Grove, CA.* October 12, 2020.
2. Au Clair Consulting, Inc. *Proposed Sheldon Grove Residential Development Sanitary Sewer Memorandum*. October 22, 2020.
3. Au Clair Consulting, Inc. *Proposed Sheldon Grove Residential Development Water Supply Memorandum*. November 3, 2020.
4. California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.
5. California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed January 2019.
6. California Department of Fish and Game. *Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California.* November 8, 1994.
7. California Department of Forestry and Fire Protection. *Sacramento County, Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE*. July 30, 2008.
8. 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 August 2020.
9. California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.
10. California Regional Water Quality Control Board, Central Valley Region. *Order No. R5-2016-0020-01 NPDES No. CA0077682*. April 2016.
11. CalRecycle. *Jurisdiction Diversion/Disposal Rate Summary (2007 – Current)*. Available at: https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006. Accessed October 2020.
12. City of Elk Grove. *General Plan*. February 2019.
13. City of Elk Grove. *General Plan Update Draft Environmental Impact Report*. February 2019.

14. City of Elk Grove. *Elk Grove Municipal Code, Section 62.32.100.* Current through May 8, 2019.
15. City of Elk Grove. *Swainson's Hawk Program.* Available at: http://www.elkgrovecity.org/city_hall/departments_divisions/planning/resources_and_policies/swainsons_hawk_program. Accessed July 2019.
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17. Cosumnes Fire Department. *2018 Annual Report*. 2020.
18. Cosumnes Fire Department. Operations Division. Available at: https://www.yourcsd.com/469/Operations-Division. Accessed August 2020.
19. Estep Environmental Consulting. *The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in the City of Elk Grove, California*. January 2009.
20. Federal Emergency Management Agency. *National Flood Hazard Layer.* Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed August 2020.
21. Kimley Horn. *Sheldon Grove Revised Vehicle Miles Traveled (VMT) Evaluation & Intersection Operations*. September 8, 2020
22. Kimley Horn. *Sheldon Grove Vehicle Miles Traveled (VMT) Evaluation*. July 24, 2020.
23. Madrone Ecological Consulting. *Biological Resources Assessment, Sheldon Grove, Sacramento County, California.* March 2021.
24. Native American Heritage Commission. *Native American Consultation, Pursuant to Senate Bill 18, Government Code §65352.3 and §65352.4, Sheldon Grove Project, Sacramento County*. September 17, 2020.
25. North Central Information Center. *Records Search Results for Sheldon Grove Project (APN: 115-0150-042)*. September 1, 2020.
26. Sacramento Area Sewer District. *Sewer Ordinance.* January 10, 2018.
27. Sacramento County Water Agency. *Water Supply Assessment for Sheldon Farms North.* January 2019.
28. Sacramento County Water Agency. *Zone 40 Water System Infrastructure Plan Update*. September 2016.
29. Sacramento Metropolitan Air Quality Management District. *Climate Action Planning in the Sacramento Metropolitan Air Quality Management District*. November 2017.
30. Sacramento Metropolitan Air Quality Management District. *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. October 2020.
31. Sacramento Metropolitan Air Quality Management District. *Guide to Air Quality Assessment in Sacramento County: Operational Criteria Air Pollutant and Precursor Emissions.* June 2020.
32. Saxelby Acoustics. *Environmental Noise Assessment, Sheldon Grove, City of Elk Grove*, California. October 26, 2020.
33. State Water Resources Control Board. *GeoTracker*. Available at: https://geotracker.waterboards.ca.gov/. Accessed August 2020.
34. Wallace Kuhl & Associates. *Geotechnical Engineering Report, Sheldon Grove Subdivision.* September 8, 2020.
35. Wallace-Kuhl & Associates. *Phase I Environmental Site Assessment, Sheldon Grove Subdivision, Power Inn Road and Sheldon Road, Elk Grove, California, WKA No. 12865.01.* August 12, 2020.

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 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 approved a new General Plan and certified an associated Environmental Impact Report (EIR) for the updated General Plan. The General Plan EIR is a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, 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.

With respect to the Project site background, the Project site was entitled for neighborhood commercial use during the previous Sacramento County approval of Arcadian Village Unit No. 2 (Control # 97-RZB-ZOB-SDP-0251), for which an EIR was certified, and mitigation implemented, during comprehensive grading of the Project site and buildout of the adjacent Arcadian Village Unit No. 2 components. This document specifically evaluates the potential environmental effects of the proposed residential development of the subject site not previously mitigated under the prior entitlement.

F. PROJECT DESCRIPTION

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

Project Location and Setting

The Project site consists of 19.813 acres located northeast of the Sheldon Road/Power Inn Road intersection in the City of Elk Grove, California (see Figure 1 and Figure 2). The site is identified by Assessor's Parcel Number (APN) 115-0150-042. Per the City's General Plan, the site is designated Community Commercial (CC). The site is zoned General Commercial (GC).

Currently, the Project site is vacant and undeveloped. The site consists primarily of ruderal grasses, which are regularly disked for fire suppression purposes. The site does not contain any existing wetland features or waterways, and limited, small black locust trees exist along the northwest and east edges of the Project site. An existing six-foot-tall masonry wall is located along the length of the site's northern boundary. An existing wood fence is located along the portion of the eastern site boundary that borders the adjacent single-family residences.

The topography of the site is relatively level. The Project site is bounded by Sheldon Road to the south and Power Inn Road to the west. Surrounding development includes single-family residential to the north; single-family residential development and Consumes CSD Fire Station 76 to the east; single-family residential development to the west, across Power Inn Road; and the Camden Springs Gracious Retirement Living community and Shortline Lake to the south, across Sheldon Road. Roy Herburger Elementary School is located approximately 450 feet northwest of the Project site.

Figure 1
Regional Project Location

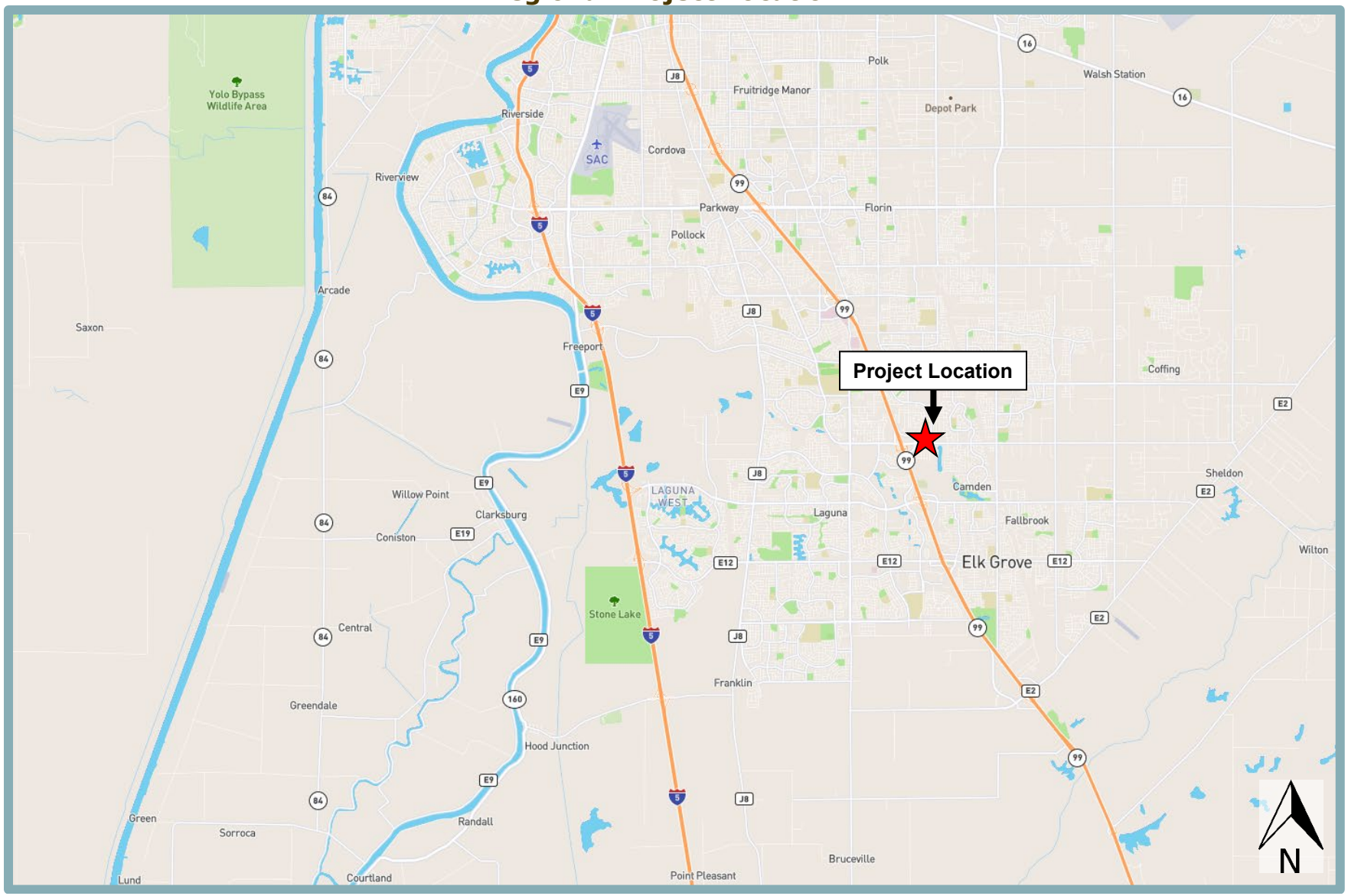


Figure 2
Project Site Boundaries



Project Components

In general, the Project would include subdivision of the Project site into 123 single-family residential lots and three landscape corridor lots (Lots A, B, and C). The landscape corridors would be located along the Project site frontages at Sheldon Road and Power Inn Road. The Project would require a General Plan Amendment, Rezone, Tentative Subdivision Map, and Subdivision Design Review. The Project components and requested approvals are discussed in detail below.

General Plan Amendment and Rezone

The Project would require a General Plan Amendment (GPA) to change the site's General Plan land use designation from CC to Low Density Residential (LDR) (see Figure 3). In addition, the Project would require a Rezone to change the site's zoning designation from GC to Low-Density Residential, 7 dwelling units per acre (RD-7) (see Figure 4).

Tentative Subdivision Map

The 123 proposed single-family lots would range in size from approximately 4,725 square feet (sf) to 5,460 sf (see Figure 5). Average interior lot dimensions would be 45 feet by 105 feet; corner lots would have minimum dimensions of 52 feet by 105 feet. Overall, the proposed Project would result in a density of approximately 6.2 dwelling units per acre. Five lots (Lots 32, 33, 42, 43, and 44) on the eastern edge of the site would have a lot depth that exceeds the City's standard 3:1 ratio of depth to width, due to a notch in the Project site boundary near Fire Station 76.

Access to the Project site would be provided by a new full-access street (D Street) connecting to Sheldon Road at the approximate midpoint of the site and a new right-in, right-out street (A Street) connecting to Power Inn Road near the northwestern corner of the site. The Sheldon Road median would be reconstructed to provide a left-turn lane in and left-turn lane out, with raised curbs at the proposed D Street access. Within the Project site, access to individual homes would be provided through a grid-like pattern of public streets with two cul-de-sacs located within the eastern portion of the site.

Along the Project frontages, new 15- to 19-foot-wide landscape corridors would be provided adjacent to the existing six-foot-wide curb, gutter, and sidewalk. The proposed landscape corridors would match the size of the existing corridor on the west side of Power Inn Road. With implementation of the Project, the existing masonry wall and wooden fencing along the northern and eastern site boundaries would be retained. The Project would not alter the existing sidewalks and bike lanes provided along the site frontages.

Water supply to the proposed development would be provided by the Sacramento County Water Agency (SCWA). Sewer service would be provided by the Sacramento Area Sewer District (SASD). Stormwater generated by impervious surfaces within the Project site would be captured by a series of curb inlets and conveyed, through new 12-inch and 15-inch storm drains, to a new manhole located along the existing 36-inch storm drain within Power Inn Road to the west of the site, and ultimately directed towards an off-site detention basin (see Figure 6). Off-site water, sewer, stormwater, electrical, and telecommunications utility improvements to be constructed with the Project would be limited to connections to existing infrastructure within the paved rights-of-way along the Project frontages.

Figure 3
Proposed General Plan Amendment

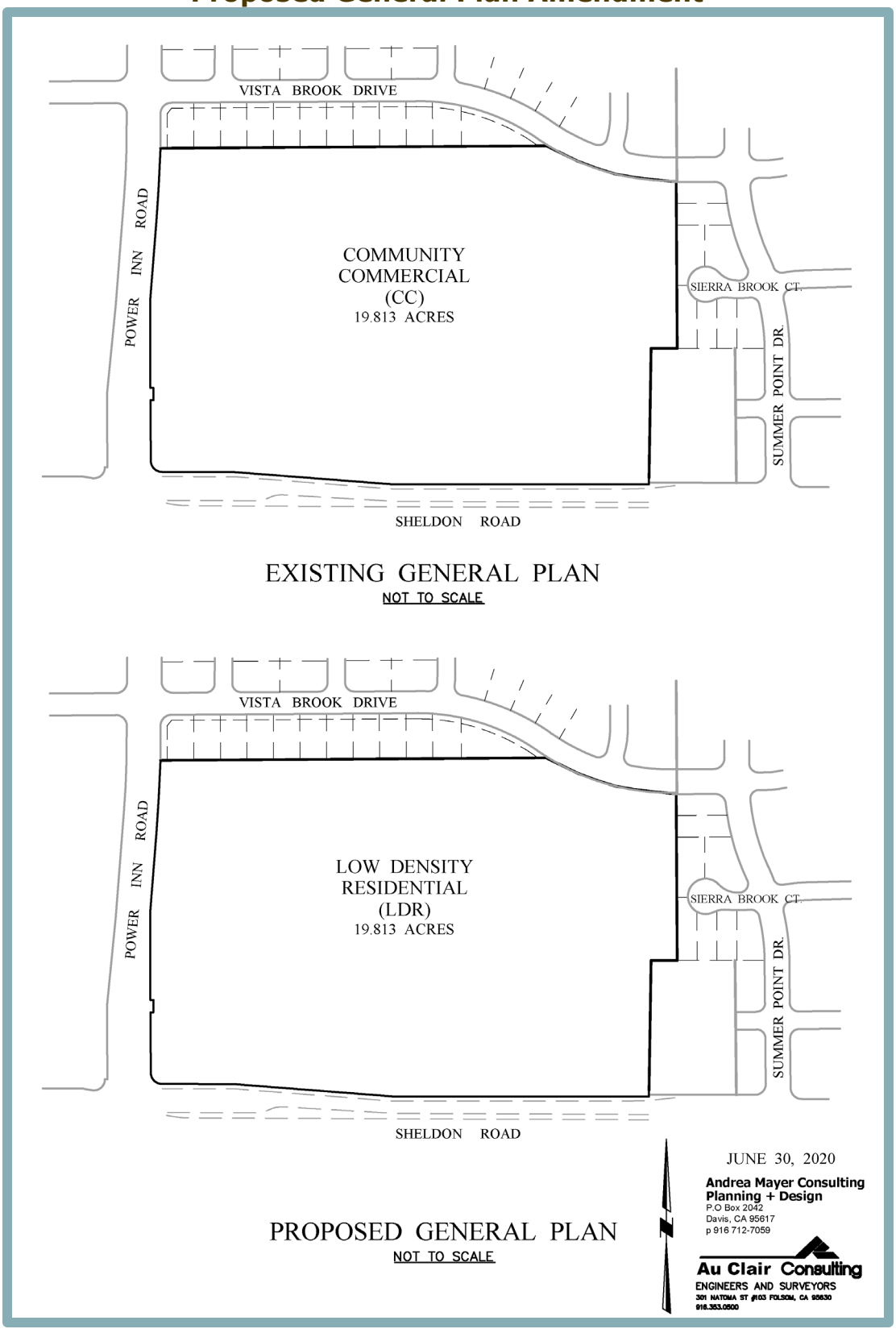


Figure 4
Proposed Rezone

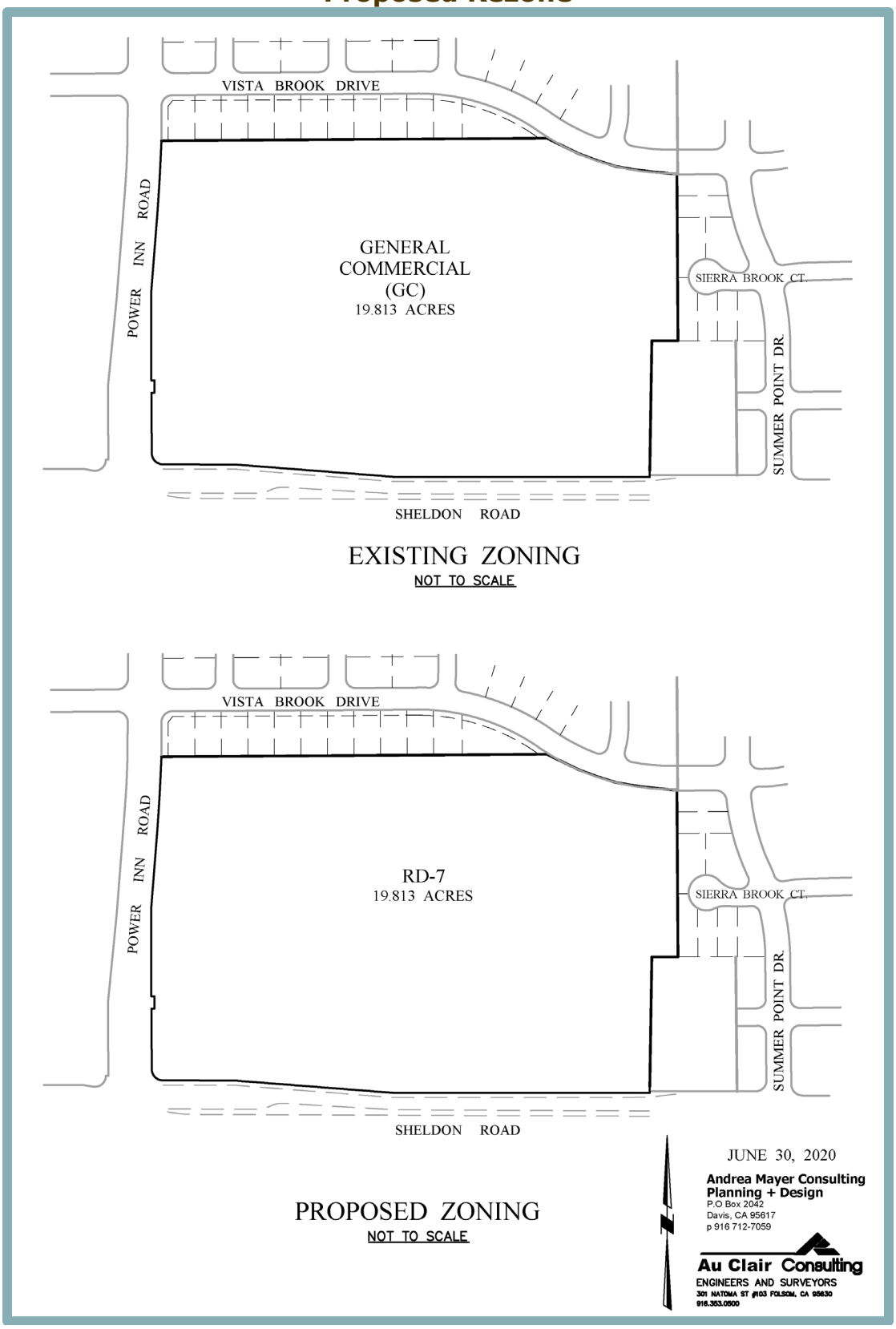


Figure 5
Tentative Subdivision Map

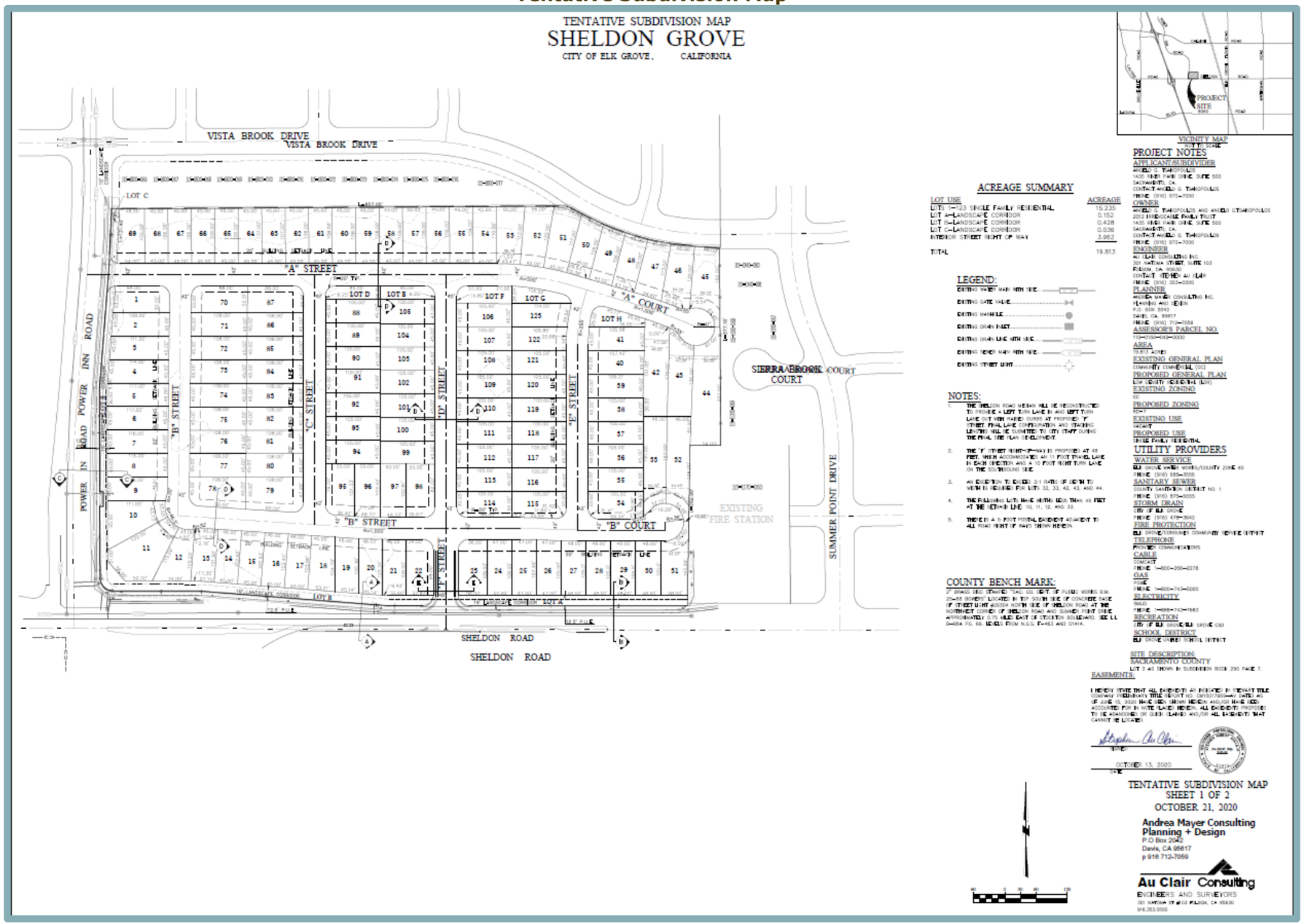
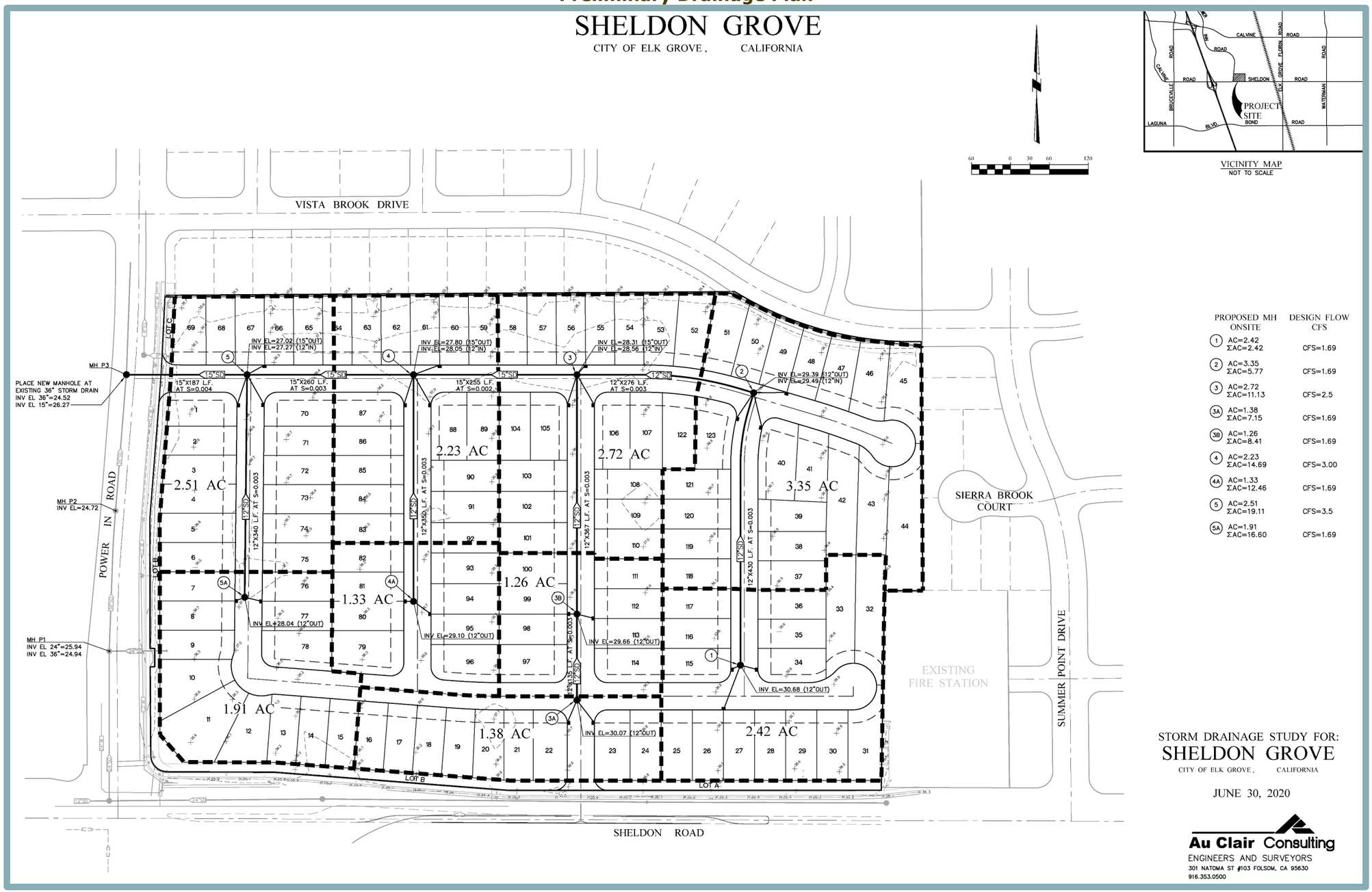


Figure 6
Preliminary Drainage Plan



Subdivision Design Review

The project includes a subdivision design review with a Deviation for a reduced landscape corridor of 21 feet on Power Inn Road. Pursuant to Section 23.16.080 of the City of Elk Grove Municipal Code, 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.

Per Section 23.16.080(F), a design review permit or any modification thereto may only be granted when the following conditions are met:

1. The proposed Project is consistent with the objectives of the General Plan, complies with applicable zoning regulations, specific plan provisions, special planning area provisions, Citywide and/or other applicable design guidelines, and improvement standards adopted by the City;
2. The proposed architecture, site design, and landscape are suitable for the purposes of the building and the site and will enhance the character of the neighborhood and community;
3. The architecture, including the character, scale and quality of the design, relationship with the site and other buildings, building materials, colors, screening of exterior appurtenances, exterior lighting and signing and similar elements establishes a clear design concept and is compatible with the character of buildings on adjoining and nearby properties;
4. The proposed Project will not create conflicts with vehicular, bicycle, or pedestrian transportation modes of circulation; and
5. For residential subdivision design review applications, the residential subdivision is well integrated with the City's street network, creates unique neighborhood environments, reflects traditional architectural styles, and establishes a pedestrian friendly environment.

Project Approvals

The Project would require City approval of the following:

- General Plan Amendment from CC to LDR;
- Rezone from GC to RD-7;
- Tentative Subdivision Map; and
- Subdivision Design Review.

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. In addition, according to the California Scenic Highway Mapping System, the Project site is located approximately six miles east of the nearest State Scenic Highway, State Route (SR) 160.[1] The Project site is not visible from SR 160.

The General Plan EIR did not identify any significant impacts related to scenic vistas or State Scenic Highways. 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. Thus, a ***less-than-significant*** impact would occur.

c. Distinguishing between public and private views is important when evaluating changes to visual character or quality, because private views are views seen from privately-owned land and are typically associated with individual viewers, including views from private residences. Public views are experienced by the collective public, and include views of significant landscape features and along scenic roads. According to CEQA (Pub. Resources Code, § 21000 et seq.) case law, only public views, not private views, are protected under CEQA. For example, in *Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal.App.4th 720 [3 Cal. Rptr.2d 488], the court determined that "we must differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general. As recognized by the court in *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188 [129 Cal.Rptr. 739]: '[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether [the Project] will adversely affect particular persons but whether [the Project] will adversely affect the environment of persons in general.'" Therefore, the focus in this section is on potential impacts to public views. Sensitive public viewers in the

[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 August 2020.

surrounding area include motorists, bicyclists, and pedestrians travelling on Power Inn Road and Sheldon Road. Views of the site from Vista Brook Drive, to the northeast of the site, are blocked by the existing six-foot-tall masonry wall along the site boundary.

The Project would change the visual character of the site from a vacant lot to a residential development. However, the Project site is already located within an urban area and is surrounded by existing development. In addition, the Project would provide for 15- to 19-foot wide landscaped corridors with trees, shrubs, and groundcover along the Project frontages. Such landscaped buffers would help to screen public views of the proposed structures from the surrounding roadways. Furthermore, all architectural elements of the Project would be designed in compliance with the applicable sections of the City's Design Guidelines.

The Project site is located in an urbanized area, and the Project would essentially serve as an extension of the existing residential development in the Project vicinity. The proposed single-family residences would include lot sizes similar to the single-family residential development to the north and east of the site. 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 physical, visual, and functional compatibility between uses. Required findings for a design review permit are as follows:

1. The proposed Project is consistent with the objectives of the General Plan, complies with applicable zoning regulations, specific plan provisions, special planning area provisions, Citywide and/or other applicable design guidelines, and improvement standards adopted by the City;
2. The proposed architecture, site design, and landscape are suitable for the purposes of the building and the site and will enhance the character of the neighborhood and community;
3. The architecture, including the character, scale and quality of the design, relationship with the site and other buildings, building materials, colors, screening of exterior appurtenances, exterior lighting and signing and similar elements establishes a clear design concept and is compatible with the character of buildings on adjoining and nearby properties;
4. The proposed Project will not create conflicts with vehicular, bicycle, or pedestrian transportation modes of circulation; and
5. For residential subdivision design review applications, the residential subdivision is well integrated with the City's street network, creates unique neighborhood environments, reflects traditional architectural styles, and establishes a pedestrian friendly environment.

Per the City's General Plan, the Project site has been anticipated for development. As such, changes to the visual character and quality of the site have been anticipated by the City. Further, the existing general commercial zoning could allow commercial structures with greater heights (40 feet)[2] than the proposed single-family homes (30 feet). Thus, aesthetics effects of the Project would likely be less than buildout of the site pursuant to

[2] Pursuant to Code Section 23.29.20, Footnote 2 of Table 23.29-1, for the commercial zoning districts, "As part of the design review process, the maximum height may be increased to a height as determined by the designated approving authority; provided, that the intensity of the development is consistent with the General Plan and on-site improvements, including but not limited to architectural articulation, quality, and materials and landscaping, are provided to ensure, as determined by the approval authority, compatibility with the surrounding context and character of the project site."

existing zoning. In addition, as discussed above, the Project would include landscaping elements to help screen public views of the site and would be visually compatible with the existing residential development to the north, east, and west of the site. Therefore, impacts related to substantially degrading the existing visual character of the site and its surroundings or a conflict with applicable zoning and other regulations governing scenic quality would be ***less-than-significant***.

d. The Project site is currently undeveloped and, thus, does not contain any existing sources of light or glare. Implementation of the Project would develop the site with residential buildings, 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 windows, exterior lighting on homes, street lighting on the internal street system, 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.

Primary lighting sources within the proposed development would include street lighting. The City's Design Guidelines require that street lighting along local residential streets be designed at a pedestrian scale with a maximum height of 14 feet. Compliance with such standards would ensure that on-site lighting would not substantially illuminate adjacent properties. In addition, new landscaping elements along the Project frontages would help to further screen the proposed exterior light fixtures.

Given the general consistency of the Project with surrounding residential development, compliance with the City's Design Guidelines, 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 Project site is currently vacant and undeveloped and consists primarily of ruderal grasses, which are regularly mowed and baled. The site is not zoned or designated in the General Plan for agriculture uses, and such uses would be incompatible with surrounding land uses in the area. Currently, the site is designated as "Farmland of Local Importance" and "Grazing Land" per the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).[3] While the General Plan EIR identified a significant and unavoidable impact related to cumulative loss of Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), Farmland of Local Importance and Grazing Land are not considered "Important Farmland" under CEQA.[4] The City's General Plan does not require mitigation for conversion of Farmland of Local Importance or Grazing Land.

Given the FMMP designations 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 have a ***less-than-significant*** impact.

b. The Project 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 Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]).

[3] California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed January 2019.

[4] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.2-8]. February 2019.

As such, 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.

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 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.

Due to the nonattainment designations, SMAQMD, along with the other air districts in the SVAB region, is required to develop plans to attain the federal and State AAQS for ozone and particulate matter. The attainment plans currently in effect for the SVAB are the *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2013 Ozone Attainment Plan), *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* ($PM_{2.5}$ Implementation/Maintenance Plan), and the 1991 Air Quality Attainment Plan (AQAP), including triennial reports. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control measures have worked, and show how air pollution would be reduced. In addition, the plans include the estimated future levels of pollution to ensure that the area would meet air quality goals.

Nearly all development projects in the Sacramento region have the potential to generate air pollutants that may increase the difficultly 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 pounds per day (lbs/day) and tons per year (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 Project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 software – 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 California Building Standards Code (CBSC), etc. The emissions intensity factor for electricity consumed at the Project site was updated to reflect Sacramento Municipal Utility District's (SMUD's) progress towards achieving the State's Renewable Portfolio Standards (RPS). Where Project-specific data was available, such data was input into the model (e.g., construction phases and timing, inherent site or Project design features, compliance with applicable regulations, etc.). Accordingly, the Project's modeling assumed the following:

- Construction would likely commence in May of 2021;
- Construction would occur over an approximately two-year period;
- A total of 19.81 acres would be disturbed during grading;
- Trip generation rates were adjusted based on the Traffic Report prepared for the Project;
- Fireplaces would not be included in the proposed residences; and
- The Project would comply with all applicable provisions of the Model Water Efficiency Landscape Ordinance (MWELO), 2019 CALGreen Code, and 2019 CBSC, including the provision of solar panels sufficient to generate 100 percent of the on-site electricity demand.

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 in 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 intermittently within the site and vicinity, until all construction has been completed, construction is a potential concern because the proposed Project is 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 [California Code of Regulations, 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 CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, 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.

Table 2 below presents the estimated construction-related emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the proposed Project in comparison with the SMAQMD thresholds of significance as described above.

Table 2
Maximum Unmitigated Construction Emissions

Pollutant	Project Emissions	Construction Threshold	Exceeds Threshold?
ROG	8.73 lbs/day	-	**NO**
NO_X	46.45 lbs/day	85 lbs/day	**NO**
PM_{10}	20.25 lbs/day and 0.30 tons/yr	80 lbs/day and 14.6 tons/yr	**NO**
$PM_{2.5}$	11.85 lbs/day and 0.17 tons/yr	82 lbs/day and 15 tons/yr	**NO**

Source: CalEEMod, November 2020 (see Appendix A).

As Table 2 indicates, the Project's maximum unmitigated construction-related emissions would be below the applicable thresholds of significance. Therefore, construction activities associated with development of the Project would not substantially contribute to the SVAB's non-attainment status for ozone or PM. 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 the future resident 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 implementation of SMAQMD's BACTs; therefore, the Project would be 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	8.10 lbs/day	65 lbs/day	**NO**
NO_X	7.89 lbs/day	65 lbs/day	**NO**
PM_{10}	6.21 lbs/day and 1.09 tons/yr	80 lbs/day and 14.6 tons/yr	**NO**
$PM_{2.5}$	1.78 lbs/day and 0.31 tons/yr	82 lbs/day and 15 tons/yr	**NO**

Source: CalEEMod, November 2020 (see Appendix A).

As Table 3 indicates, the Project's maximum unmitigated operational emissions would be below the applicable thresholds of significance. Therefore, operations associated with development of the proposed Project would not substantially contribute to the SVAB's

non-attainment status for ozone or PM_{10}, 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 to the north and east of the Project site.

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. Issues related to odors are discussed under question 'd' below.

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. 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.

The Project would not involve any land uses or operations that would be considered major sources of TACs, including DPM. As such, the Project would not generate any substantial pollutant concentrations during operations. Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the Project. Specifically, as noted above, construction would occur over an approximately two-year period. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater) and, therefore, construction of the Project is not anticipated to result in any adverse health risks for nearby receptors.

All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. The In-Use Off-Road Diesel Vehicle Regulation includes the following standards:

- Imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled;
- Restricts the adding of older vehicles into fleets; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).

In addition, construction equipment would operate intermittently throughout the day and only on portions of the site at a time, and construction activity occurring adjacent to existing residential uses would be limited to the hours of 7:00 AM to 7:00 PM per Section 6.32.100 of the City's Municipal Code.[5] Because construction equipment on-site would not operate

[5] Section 6.32.100 states that "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".

for long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire Project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a permanent or substantially extended period of time would be low. Therefore, construction of the Project would not be expected to expose nearby sensitive receptors to substantial pollutant concentrations.

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* (Draft Guidance) for the analysis of criteria emissions in areas within the District's jurisdiction. [6] The Guidance represents SMAQMD's effort to develop a methodology that provides a consistent, 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 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 proposed 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 in 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 below.

[6] Sacramento Metropolitan Air Quality Management District. *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*. October 2020.

Table 4
Health Effects from Proposed 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	0.83	0.0045	18,419
Hospital Admissions, Asthma	0-64	0.06	0.0030	1,846
Hospital Admissions, All Respiratory	65-99	0.25	0.0013	19,644
Cardiovascular $PM_{2.5}$				
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	0.14	0.00059	24,037
Acute Myocardial Infarction, Nonfatal	18-24	0.00	0.0018	4
Acute Myocardial Infarction, Nonfatal	25-44	0.01	0.0020	308
Acute Myocardial Infarction, Nonfatal	45-54	0.02	0.0022	741
Acute Myocardial Infarction, Nonfatal	55-64	0.03	0.0021	1,239
Acute Myocardial Infarction, Nonfatal	65-99	0.09	0.0018	5,052
Mortality $PM_{2.5}$				
Mortality, All Cause	30-99	1.70	0.0038	44,766
Respiratory Ozone				
Hospital Admissions, All Respiratory	65-99	0.05	0.00027	19,644
Emergency Room Visits, Asthma	0-17	0.29	0.0050	5,859
Emergency Room Visits, Asthma	18-99	0.46	0.0036	12,560
Mortality Ozone				
Mortality, Non-Accidental	0-99	0.04	0.00011	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. October 2020 (see Appendix B).

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 proposed Project could result in 1.7 premature deaths per year due to the Project's $PM_{2.5}$ emissions and 0.04 premature deaths per year due to the Project's ozone emissions. Such numbers represent a very small increase over the background incidence of premature deaths due to $PM_{2.5}$ and ozone concentrations (0.0038 percent and 0.00011 percent, respectively). In addition, according to the Minor Project Health Effects Screening Tool, $PM_{2.5}$ emissions from the proposed Project could result in 0.83 asthma-related emergency room visits, and ozone emissions from the proposed Project could result in 0.75 asthma-related emergency room visits. Such numbers represent a minute increase over the background level of asthma-related emergency room visits (0.0045 percent and 0.0086 percent, respectively). As noted above, because the proposed Project's emissions would be substantially below the SMAQMD thresholds of significance, the Project's actual health impacts associated with criteria pollutant emissions would be much lower than what is presented above.

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 proposed Project would not result in emissions of criteria pollutants that would exceed the SMAQMD standards, the proposed 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.

The results of the Minor Project Health Effects Screening Tool have been presented for informational purposes only. Overall, because the Project would be 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 sections "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 and is not located in the vicinity of any such existing or planned 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 every day, unless unforeseen conditions occur, per Section 6.32.100 of the City's Municipal Code. Project construction would also be required to comply with all applicable SMAQMD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions as well as any associated odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

Dust

As noted previously, construction of the proposed 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

For the reasons discussed above, construction and operation of the 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. The following discussion is based primarily on a Biological Resources Assessment prepared for the Project by Madrone Ecological Consulting (Appendix C).[7]

Currently, the Project site is vacant and undeveloped. The site consists primarily of ruderal grasses, which are regularly disked for fire suppression purposes. The site does not contain any wetland features or waterways; however, existing trees are present along the northwest and east edge of the Project site, as well as outside the edge of the site boundaries within the neighboring residential areas. The site consists primarily of relatively flat terrain ranging from 38 to 40 feet above mean sea level (msl).

Based on a review of historic aerial photography and USGS topographic maps, the site was flood irrigated in the 1960s and utilized for agricultural purposes. Additional major disturbances occurred in 2002 when the site was graded during the construction of the surrounding residential developments and used as a construction equipment staging area.

For the purposes of this analysis, special-status species include those species that are:

- Listed as threatened or endangered, or proposed or candidates for listing by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service;

[7] Madrone Ecological Consulting. *Biological Resources Assessment, Sheldon Grove, Sacramento County, California.* March 2021.

- Listed as threatened or endangered and candidates for listing by the California Department of Fish and Wildlife (CDFW);
- Identified as Fully Protected species or species of special concern by CDFW;
- Identified as Medium or High priority species by the Western Bat Working Group (WBWG); and
- Plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (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.

As part of the Biological Resources Assessment, a query was conducted for published records of special-status plant and wildlife species for the Florin USGS 7.5" quadrangle, in which the Project site occurs, using the California Natural Diversity Data Base (CNDDB) Rarefind 5 application. In addition, the Biological Resources Assessment included a search of the USFWS Information for Planning and Conservation, the CNPS Rare and Endangered Plant Inventory, and the WBWG Species Matrix. The intent of the database review was to identify documented occurrences of special-status species in the vicinity of the Project area, to determine their locations relative to the Project site, and for use in the field assessment of habitats suitable for special-status species within the site. On September 15, 2020, a field survey was conducted on the Project site.

The results of the CNDDB search and the site survey are discussed below.

Special-Status Plants

Based on the results of the CNDDB search, a total of 22 special-status plant species have been recorded within the Project region. Of the 22 species, all are considered absent from or unlikely to occur on the site due to a lack of suitable habitat, such as vernal pools and serpentine or alkaline soils. Special-status plant species were not observed on-site during the 2020 site visit. In addition, as noted previously, the Project site is regularly disked. As such, special-status plant species are unlikely to occur on the Project site, and development of the Project would not result in significant impacts to such species.

Special-Status Wildlife

Based on the results of the CNDDB search, at total of 27 special-status wildlife species have been recorded within the Project region. Of the 27 species, 17 species would be absent from or unlikely to occur on the site due to a lack of suitable habitat. For example, as noted in the Biological Resources Assessment, because the site lacks vernal pool/depressional seasonal wetland habitat, federally-listed vernal pool invertebrates do not occur on the site. In addition, the site does not contain any features that would provide suitable habitat for special-status bats. However, as described in the following sections, the Project area contains potentially suitable habitat for tricolored blackbird, burrowing owl,

Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, and other migratory birds and raptors protected under the MBTA.

Tricolored Blackbird

Tricolored blackbird populations, which are currently in decline throughout the state, were listed as threatened under CESA by the California Fish and Game Commission. Since the 1980's, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder.

The CNDDB records 15 occurrences of tricolored blackbird within a five-mile radius of the Project site, including CNDDB Occurrence #19, which is centered just south of the Project site and was first observed in 1982. Occurrence #19 consisted of a colony of approximately 130 nesting pairs. The occurrence is classified as "possibly extirpated" due to residential development throughout the Project area.

A Himalayan blackberry thicket along the east edge of the Project site perimeter is too sparse to represent suitable nesting habitat for tricolored blackbird; however, the ruderal annual grasses within the site provide marginally suitable foraging habitat. Thus, a low potential exists for occurrence of the species within the Project site.

Burrowing Owl

Burrowing owl is not listed pursuant to either CESA or FESA; however, the species is designated as a species special concern by the CDFW. The species is a raptor that typically inhabits dry, open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. Burrowing owl typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use burrow surrogates such as culverts; cement, asphalt, or wood debris piles, or openings beneath cement or asphalt pavement. The breeding season extends from February 1 through August 31.

The nearest CNDDB occurrence is located approximately one mile south of the Project site in the vicinity of the Laguna Boulevard Highway 99 south on-ramp (CNDDB Occurrence #1258). Though ground squirrel burrows, or other suitable nesting sites, were not observed on the Project site during the 2020 field survey, a comprehensive survey for burrowing owl habitat was not performed. The ruderal annual grasslands provide very limited suitable foraging habitat for the species; a moderate potential exists for occurrence of burrowing owl within the Project site. Should the species be present on-site during the start of Project construction activities, a potentially significant impact could occur.

Swainson's Hawk

Swainson's hawk 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. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter.

The CNDDB records 36 occurrences of nesting Swainson's hawks within five miles of the Project site. One occurrence from 2001 (CNDDB Occurrence #933) is potentially located within or within close proximity to the Project site on the north side of Sheldon Road; however, based on a review of historic aerial photography, any potential nest trees within

the area were removed prior to 2003 during the construction of the surrounding residential developments.

Figure 7 displays CNDDB occurrences of Swainson's hawk nests within 0.5-mile of the Project site, all of which are relatively old (1989-2002) and most were recorded prior to the development of the area. Details on the current status of each historic occurrence are included in Figure 7, but all three of these nest trees are either gone, or are remaining on fully developed lots and have not had recently recorded use by Swainson's hawk.

Figure 8 portrays CNDDB occurrences of "active" Swainson's hawk nests – or nests known to be active within the last 5 calendar years – located within 10 miles of the Project site. All are located along the Sacramento River approximately 10 miles west of the Project site. There are no active nests recorded in the CNDDB within the vicinity of the site, and the nearest active nests located approximately 10 miles away (to the northwest near the riparian zone of the Sacramento River) are much further than the 2-mile foraging range usually assumed around active nests.

It is important to note, however, that ongoing monitoring of Swainson's hawk nests recorded in CNDDB is not regularly conducted; and the possibility exists that some of the known nest sites have been used by Swainson's hawk in more recent years. Those nest locations that have been used within the last five years would be considered "active", pursuant to CDFW's "Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California" (1994).

The Project site lacks trees of optimal size to present suitable nesting habitat. The Project site does contain ruderal annual grassland, though the natural grade has been raised as fill has been imported to the site and compacted during rough grading associated with previous development of the site and surrounding area. The property's isolated nature with development surrounding it on all sides, intensive and ongoing management practices, and apparent lack of rodent activity leads the consulting biologist to believe that it represents low-quality foraging habitat for Swainson's hawk. While it is possible a hawk passing through the area could attempt to forage at the site, the biologist does not believe development of the parcel would represent a significant impact (as defined by CEQA) to hawks in the region. Following is additional information to support this conclusion:

- Regarding nesting habitat, none of the trees on-site or on the immediately adjacent parcels are of optimal size to support Swainson's hawk nests (see Figure 7);
- The site has been built up with imported soil and subsequently compacted. It supports ruderal grasslands that could potentially provide habitat for foraging Swainson's hawks; however, the site has been heavily graded in the past and is annually disked for fire and weed control thereby reducing the density of prey species such as rodents, rabbits, and reptiles;
- The site is surrounded by development on all sides and therefore isolated, and as expected, very little rodent activity, including burrows, was noted at the time of the biologist's site visit. Surrounding development limits availability of prey in the area, and the existing roadways likely limit the ability of prey that may be in the area to migrate into the site;

Figure 7
CNDDB Occurrences of Swainson's Hawk Nests within 0.5-Mile of the Project Site

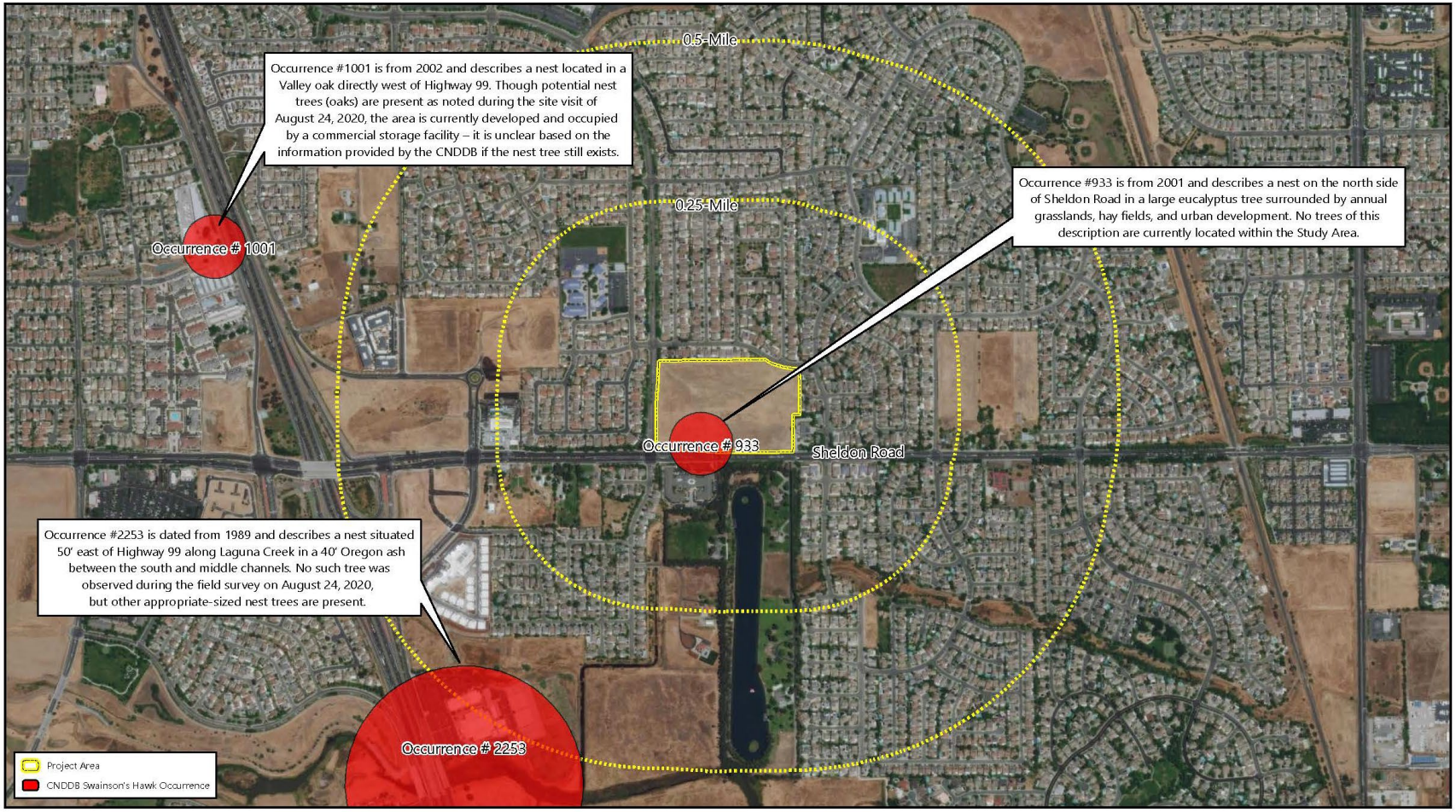
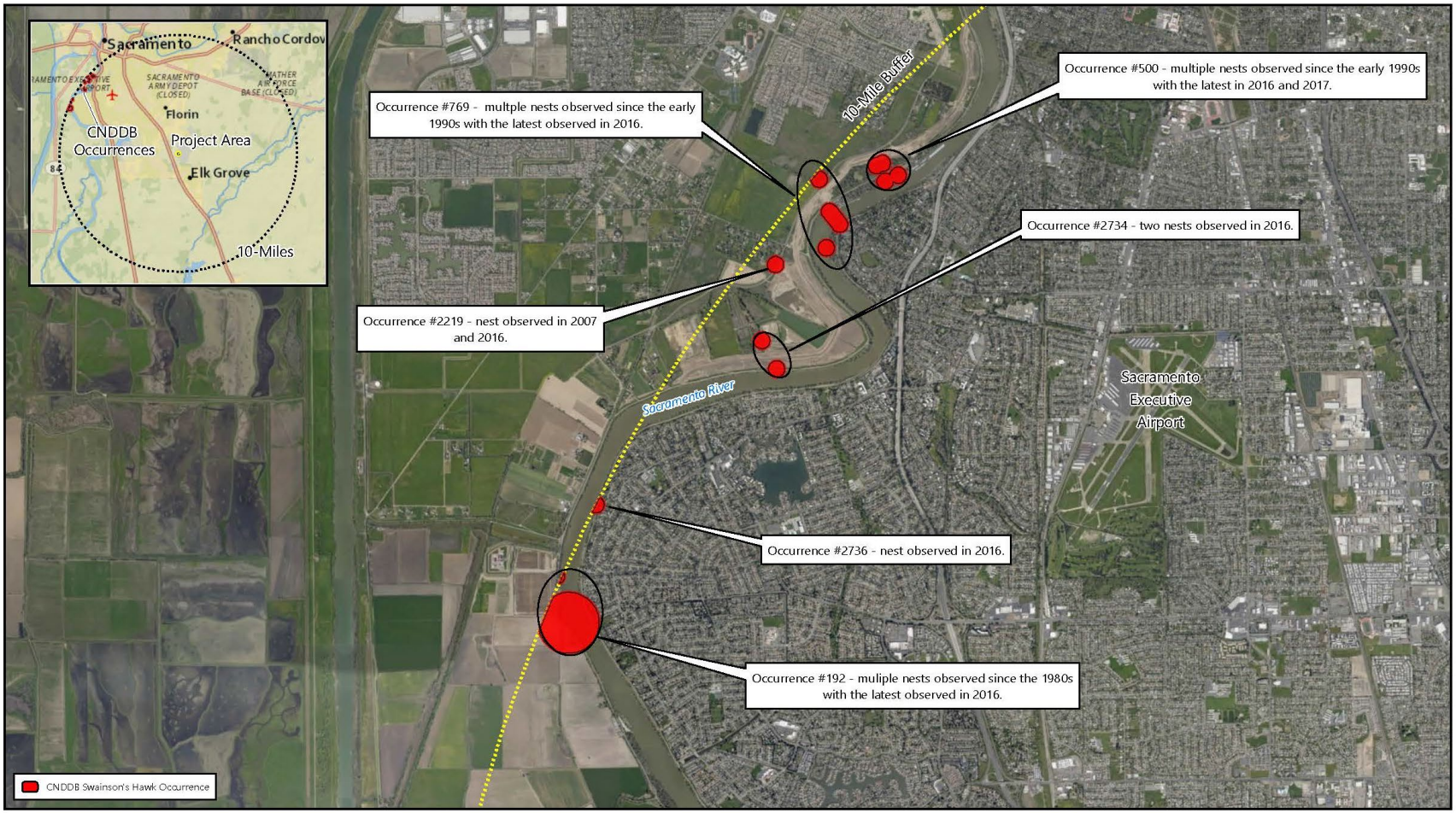


Figure 8
Known Active Swainson's Hawk Nests within 10 Miles of Project Site



- The close proximity of the site to residential developments has likely further reduced the density of Swainson's hawk prey species due to predation by domestic cats and dogs;
- Sidewalks border the south and west sides of the site and accommodate foot and bicycle traffic, which further reduces the quality of foraging habitat, including the ability of prey to access the site; and
- The site is located adjacent to Sheldon Road, which is a well-traveled connector street – the high volume of vehicular traffic likely presents an inhibiting disturbance to potentially foraging Swainson's hawks.

In addition, a report entitled, *The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in the City of Elk Grove, California* (January 2009), prepared by Estep Environmental Consulting, classifies the project site as "High Density Urban", which is noted to consist of dense small-lot residential or commercial development with open spaces consisting mainly of community parks and golf courses. The report notes, "While it is possible that Swainson's hawks could nest in these areas if suitable trees existing and if they were within 1 to 2 miles of suitable foraging habitat (England et al. 1995), there are no foraging opportunities within this type."

Based on the above-listed information, it is the biologist's professional opinion that the Project site provides low-quality, marginal foraging habitat for Swainson's hawk, and that while it is possible the Project site could be used for foraging by hawks in or migrating through the area, it is an isolated patch of ruderal vegetation surrounded by development, and there is a low likelihood of use.

In 2003, the City established and adopted Chapter 16.130 (Swainson's Hawk Impact Mitigation Fees) of the Elk Grove Municipal Code, 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. Chapter 16.130 of the 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.[8] The Project 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.

Nevertheless, in recognition that the Project site provides marginal foraging habitat for Swainson's hawk, known active nests are located greater than five miles and within 10 miles of the Project site, and other active nests may be located closer to the Project site, the Project could have an adverse effect on Swainson's hawk foraging habitat.

Northern Harrier

The northern harrier is not listed pursuant to either CESA or FESA; however, the species is considered a species of special concern by the CDFW. The raptor is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California. The northern harrier is a ground nesting species and typically nests in emergent

[8] City of Elk Grove. *Swainson's Hawk Program.* Available at: http://www.elkgrovecity.org/city_hall/departments_divisions/planning/resources_and_policies/swainsons_hawk_program. Accessed July 2019.

wetland/marsh, open grasslands, or savannah habitats. Foraging occurs within a variety of open habitats such as marshes, agricultural lands, and grasslands.

Recorded CNDDB occurrences of the species have not been documented within five miles of the Project site; however, the IPaC considers the site as potential habitat for northern harrier. The ruderal annual grasses provide marginally suitable foraging habitat; however, the Project site likely does not provide suitable nesting habitat as the site is disked annually for fire and weed control. Per the Biological Resources Assessment, a low potential exists for occurrence of the species within the Project site. Should the species be present on-site during the start of Project construction activities, a potentially significant impact could occur.

White-Tailed Kite

White-tailed kite 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. 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.

The nearest CNDDB occurrence of white-tailed kite (CNDDB Occurrence #28) is located approximately 3.5 miles northeast of the Project site, south of McCoy Avenue. The ruderal annual grasses on the site provide marginally suitable foraging habitat, but the existing trees along the outside edge of the site boundaries are too small to provide nesting habitat. Overall, a low potential exists for occurrence of white-tailed kite within the Project site.

Loggerhead Shrike

The loggerhead shrike is not listed pursuant to either CESA or FESA; however, the species is a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California. The nesting season ranges from March through June.

The species has not been documented by the CNDDB within five miles of the Project site; however, the site is located within the historic range of loggerhead shrike. The ruderal annual grasses on the site provide very limited suitable foraging habitat, and the trees on-site provide marginal nesting habitat. A moderate potential exists for occurrence of loggerhead shrike within the Project site.

Other Migratory Birds and Raptors

Pursuant to the Biological Resources Assessment, the Project site lacks trees of optimal size to support larger tree-nesting raptors protected under the MBTA, such as Cooper's hawk, ferruginous hawk, and merlin. Nonetheless, while unlikely, buildout of the Project during the nesting period for migratory birds (i.e., typically between February 1 to August 31), including initial grading activities, could pose a risk of nest abandonment and death of any live eggs or young that may be present within nests that are near the Project site. The Project site could provide limited suitable foraging habitat for migratory birds and raptors protected under the MBTA and, thus, such species have a low potential to occur on-site.

Conclusion

Based on the above, special-status plant species are not likely to occur on-site. While the Project site does provide suitable foraging habitat for the tricolored blackbird, northern harrier, white-tailed kite, loggerhead shrike, and migratory birds and raptors protected under the MBTA, such species would flee prior to construction activities and, thus, would not be harmed as a result of Project construction. As a result, the Project would not result in adverse effects to the tricolored blackbird, northern harrier, white-tailed kite, or loggerhead shrike.

Implementation of the Project could potentially result in adverse effects to Swainson's hawk, burrowing owl, and other migratory birds and raptors protected by the MBTA that may nest on-site. However, implementation of Mitigation Measures IV-1 through IV-3 would ensure that the Project would not have 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 ***less-than-significant*** with mitigation incorporated.

Mitigation Measure(s)

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

Swainson's Hawk

IV-1(a). *A targeted Swainson's hawk nest survey shall be conducted throughout all accessible areas within 0.5-mile of the proposed construction area within 14 days prior to construction activities. If no active Swainson's hawk nests are identified on or within 0.5-mile of the Project site within the recommended survey periods, a letter report summarizing the survey results shall be submitted to the Development Services Department within 30 days following the final survey, and no further avoidance and minimization measures for nesting habitat are required.*

If active Swainson's hawk nests are found within 0.5-mile of the construction area, construction shall cease within 0.5-mile of the nest until a qualified biologist determines that the young have fledged, or that the nesting attempt has failed. If the Project applicant desires to work within 0.5-mile of the nest, the applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced. The Project applicant, the qualified biologist, the City, and CDFW shall collectively determine the nest avoidance buffer, and what (if any) nest monitoring is necessary. If an active Swainson's hawk nest is found within the survey area prior to construction, then the Project applicant shall implement additional mitigation recommended by the qualified biologist based on CDFW guidelines and obtain any required permits from CDFW.

IV-1(b). *Prior to initiation of ground disturbing activity for the Project, a qualified biologist shall conduct a field survey of Swainson's hawk nest locations recorded in the CNDDB within a 10-mile radius of the Project site, during a period of maximum nesting activity (April through June). The biologist shall provide the City with a summary of findings of Swainson's hawk nesting*

activity within 10 miles of the Project site. If the biologist determines that the Project site is within 10 miles of an active Swainson's hawk nest (where an active nest is defined as a nest with documented Swainson's hawk uses within the past five years), the Project applicant shall mitigate for the loss of suitable Swainson's hawk foraging habitat by implementing one of the following measures, as applicable, pursuant to CDFW's "Staff Report regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California" (1994):

- *If an active nest is identified within one mile of the Project site: One acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*
- *If an active nest is identified within five miles (but greater than one mile) of the Project site: 0.75-acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*
- *If an active nest is identified within 10 miles (but greater than five miles) of the Project site: 0.5-acre of suitable foraging habitat shall be protected for each acre of suitable foraging habitat developed. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.*

Results of the nesting survey, as well as proof of purchase of mitigation credits or other land protection mechanism acceptable to the City, as required per the above mitigation options, shall be provided to the Development Services Department for review and approval prior to initiation of ground disturbance for any portion of the Project site.

Burrowing Owl

IV-2(a). *During the non-breeding season (late September through the end of January), the Applicant shall conduct a survey for burrowing owls and burrows or debris that represent suitable nesting or refugia habitat for burrowing owls within areas of proposed ground disturbance. Should owls be present, construction activities shall avoid the refugia by 250 feet until the burrowing owl vacates the site. CDFW may provide authorization for the applicant to conduct activities (burrow exclusion, etc.,) that may discourage owl use.*

If clearing and construction activities are planned to occur during the nesting period for burrowing owls (February 1–August 31), a qualified biologist shall conduct a targeted burrowing owl nest survey of all accessible areas within 500 feet of the proposed construction area within 14 days prior to construction initiation, as described in CDFG's Staff Report on Burrowing Owl Mitigation, published March 7, 2012. Surveys shall be repeated if Project activities are suspended or delayed for more than 14 days during nesting season. The results of the surveys shall be submitted

to the Development Services Department. If burrowing owls are not detected, further mitigation is not required.

If an active burrowing owl nest burrow (i.e., occupied by more than one adult owl, and/or juvenile owls are observed) is found within 250 feet of a construction area, construction shall cease within 250 feet of the nest burrow until a qualified biologist determines that the young have fledged and adult has vacated, or it is determined that the nesting attempt has failed. If the applicant desires to work within 250 feet of the nest burrow, the applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced.

IV-2(b). *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. The mitigation provided shall be consistent with recommendations in the Burrowing Owl Staff Report and may be accomplished within the Swainson's hawk foraging habitat mitigation area 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 mitigation strategy is suitable for both species.*

Migratory Birds

IV-3(a). *If vegetation clearing, grading and/or construction activities are planned to occur during the migratory bird nesting season (February 15 to August 30), 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, where access is available. If a break in construction activity of more than two weeks occurs, then subsequent surveys shall be conducted.*

If active raptor nests, not including Swainson's hawk, are found, construction activities shall not take place within 500 feet of the nest/s until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer shall be established. The no-disturbance buffers may be reduced if a smaller buffer is proposed by the qualified biologist and approved by the City (and CDFW if the species is a tricolored blackbird nesting colony) 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 the nest may be left undisturbed until the end of the nesting season.

IV-3(b). *Should construction activities cause a nesting bird to do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding*

position, or fly off the nest, 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 in consultation with CDFW and the City. Construction activities may only resume within the buffer zone after a follow-up survey by the qualified biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that new nests have not been identified.

b. Per the Biological Resources Assessment, the Project site does not contain any riparian habitat or sensitive natural communities. The site consists primarily of ruderal, non-native grasses that are regularly disked for fire suppression purposes. Therefore, 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 would be ***less-than-significant***.

c. Pursuant to the Biological Resources Assessment, the Project site does not contain any existing wetlands or other waters of the U.S. or State. As such, the Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Thus, a ***less-than-significant*** impact would occur.

d. The Project site is bordered by Sheldon Road to the south, Power Inn Road to the west, and existing development to the north and east. The site is located with an urbanized area of the City of Elk Grove. In addition, an existing masonry wall extends along the length of the northern site boundary, and a wooden fence extends along the portion of the eastern site boundary abutting the adjacent residential uses. The existing setting of the surrounding area limits the potential for use of the Project site as a wildlife movement corridor. In addition, the Project site does not contain streams or other waterways that 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. Currently, the Project site contains few small black locust trees near the northwest and east edges of the site. Such trees are not protected under the City's Municipal Code. Therefore, implementation of the Project would not conflict with Section 19.12 of the City's Municipal Code, the Project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and a ***less-than-significant*** 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 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.

Based on the above, the Project site is not located in an area with an approved HCP/NCCP, or local, regional, or State habitat conservation plan. As a result, ***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. 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.

Based on the results of a record search of the California Historic Resources Information System (CHRIS) at the North Central Information Center, a previous cultural resources study has covered a portion of the Project site.[9] Per the CHRIS search, six recorded historic-period cultural resources have been identified within a 0.25-mile radius of the Project site; however, historic resources have not been identified within the site. In addition, the Project site has been previously subjected to ground disturbance.

Based on the above, the Project would not cause a substantial adverse change in the significance of a historical resource, and a ***less-than-significant*** impact would occur.

b,c. Based on the results of the CHRIS search, the Project site does not contain any known archaeological resources. Per the CHRIS search, within the Project region, archaeologists typically locate prehistoric-period habitation sites on elevated landforms near streams. The Project site is situated in the Sacramento Valley, approximately 0.5-mile north of Laguna Creek. Given the extent of known cultural resources in the Project vicinity and the environmental setting of the Project site, the potential for archaeological resources to occur on the Project site is relatively low. Furthermore, based on the results of a search of the Native American Heritage Commission (NAHC) Sacred Lands File, the Project site does not contain known Tribal Cultural Resources.[10]

While known resources do not exist on-site, previously unknown archaeological resources, including human remains, may exist in the Project area and be obscured by vegetation, siltation, or historic agricultural activities, resulting in an absence of surficial evidence. Such resources may have the potential to be uncovered during ground-disturbing activities at the Project site.

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[9] North Central Information Center. *Records Search Results for Sheldon Grove Project (APN: 115-0150-042)*. September 1, 2020.

[10] Native American Heritage Commission. *Native American Consultation, Pursuant to Senate Bill 18, Government Code §65352.3 and §65352.4, Sheldon Grove Project, Sacramento County.* September 17, 2020.

The General Plan EIR concluded that buildout of the General Plan, including the Project site, would result in a less-than-significant impact related to cultural resources, provided that development projects within the City implement project-level mitigation to avoid resources. Implementation of Mitigation Measures V-1 through V-3 would ensure that if previously unknown resources are encountered during construction activities, the Project would not 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, impacts would be considered ***less than significant*** with mitigation incorporated.

Mitigation Measure(s)

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

V-1. *In the event of the accidental discovery or recognition of any human remains, the Development Services 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 48 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 Development Services Department. Work on the Project site cannot commence until after the human remains are removed from the area.*

V-2. *In the event that cultural resources or tribal cultural resources are discovered during grading or construction activities during development of the Project, work shall halt immediately within 100 feet of the discovery, the Development Services Director shall be immediately notified. The Applicant's on-site Construction Supervisor, the City of Elk Grove, an archaeologist meeting the Secretary of the Interior's Standards in Archaeology, and any applicable Native American tribes shall assess the*

discovery to determine if it qualifies as a tribal cultural resource. The appropriate treatment of the discovery, including any applicable avoidance or mitigation strategies, shall be determined in consultation with the City and the applicable tribes. Construction activities within 100 feet of the discovery shall not commence until the appropriate treatment has been determined and any applicable mitigation has been completed. Mitigation shall follow the recommendations detailed in Public Resources Code sections 21084.3(a) and (b), and CEQA Guidelines section 15370.Work may continue on other parts of the Project site while historical or unique archaeological resource mitigation takes place (Public Resources Code Section 21083.2).

V-3. *The applicant shall retain the services of a qualified professional to conduct a worker environmental training session for the construction crew that will be conducting grading and excavation at the Project site. The worker environmental training shall include archaeological and Tribal Cultural Resource awareness. The training shall be developed in coordination with the applicable tribes and approved by the City. The training shall identify the appropriate point of contact in the case of tribal cultural resource discovery and shall include relevant information regarding tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The training shall also underscore the requirement for confidentiality and culturally-appropriate treatment of tribal cultural resources.*

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 2019 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 2019 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the California Building Standards Code (CBSC), which became effective with the rest of the CBSC on January 1, 2020. The purpose of the CAL Green 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 CAL Green standards regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. 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 Electric Vehicle 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' Model Water Efficient Landscape Ordinance (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; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2019 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2016 Building Energy Efficiency Standards resulting in a seven percent reduction in energy consumption from the 2016 standards for residential structures. Energy reductions relative to previous Building Energy Efficiency Standards would be achieved through various regulations including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls.

One of the improvements included within the 2019 Building Energy Efficiency Standards is the requirement that certain residential developments, including some single-family and low-rise residential developments, include on-site solar energy systems capable of producing 100 percent of the electricity demanded by the residences. Certain residential developments, including developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, are exempted from the foregoing requirement; however, such developments are subject to all other applicable portions of the 2019 Building Energy Efficiency Standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards.[11]

Construction Energy Use

Construction of the Project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the Project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the Project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated per the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. The In-Use Off-Road Diesel Vehicle Regulation would subsequently help to improve fuel efficiency and reduce energy use. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction.

The CARB has prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[12] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The regulations described above, with which the Project must comply, would be consistent with the intention of the

[11] California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.
[12] California Air Resources Board. *The 2017 Climate Change Scoping Plan Update*. January 20, 2017.

2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the Project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the Project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the Project, electricity would be provided by SMUD. Energy use associated with operation of the Project would be typical of residential uses, requiring electricity for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, 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 the proposed development.

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), would ensure that the proposed structures would 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 would ensure that the building energy use associated with the Project would not be wasteful, inefficient, or unnecessary. The Project applicant has indicated that the proposed residential units would be all-electric; thus, the units would not involve any natural gas demand. In addition, electricity supplied to the Project by SMUD would comply with the State's Renewables Portfolio Standard, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. 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. Per the City's CAP, the proposed residential units would be required to be EV-ready. In addition, as discussed in Section XVII, Transportation, of this Initial Study, the Project is expected to result in a net reduction of VMT.

Conclusion

Based on the above, construction and 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. Thus, 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. Thus, the potential for surface rupture due to faulting occurring beneath the Project site during the design life of the proposed development would be low.

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 California Building Code (CBSC), which includes engineering standards appropriate for the seismic area in which the Project site is located. The most recent edition of the CBSC is adopted as Section 16.04.010 of the City's Municipal Code. Conformance with the design standards is enforced through building plan review and approval by the City of Elk Grove Division of Building prior to the issuance of building permits. Proper engineering of the Project would ensure that seismic-related effects would not cause adverse impacts.

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

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, subsidence, landslides, lateral spreading, and expansive soils are discussed in detail below. The following analysis is based primarily on a Geotechnical Engineering Report prepared for the Project by Wallace Kuhl & Associates (WKA) (Appendix D).[14]

Liquefaction

Liquefaction is a soil strength and stiffness loss phenomenon that typically occurs in loose, saturated, cohesionless soil as a result of strong ground shaking during earthquakes. Based on the variably cemented condition of the soils encountered in test pits conducted as part of the Geotechnical Engineering Report, the geologic age of the Pleistocene deposits at the site, and the lack of groundwater within the upper 50 feet of the site, the potential for liquefaction to occur at this site during a seismic event is very low. Project-specific design features 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 Project site does not contain, and is not adjacent to, any steep slopes. Thus, landslides are not likely 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 Project 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.

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.

Per the Geotechnical Engineering Report, the surface and near-surface soils are somewhat variable throughout the Project site. Laboratory tests performed on surface and near-surface soils revealed the tested materials possess low to high plasticity (Plasticity Indices of 11 and 25) when tested in accordance with the ASTM D4318 test method. In addition, laboratory tests revealed that the on-site soils possess a "low" to "medium" expansion potential when tested in accordance with the ASTM D4829 test method. Previous testing for nearby developments revealed that moderately to highly expansive clay soils are present in the site vicinity. Therefore, the near-surface soils at the Project

[14] Wallace Kuhl & Associates. *Geotechnical Engineering Report, Sheldon Grove Subdivision.* September 8, 2020.

site are considered capable of exerting moderate to high expansion pressures on building foundations, foundation slabs and exterior flatwork. Specific recommendations to reduce the effects of expansive soils, including using deeper exterior foundation embedment depth, and moisture conditioning the slab soil subgrade prior to concrete placement, would be required.

Conclusion

Based on the above discussion, the Project would not result in potential hazards or risks related to liquefaction, landslides, or lateral spreading. Therefore, the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction or landslides, and would not 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, liquefaction or collapse. However, implementation of Project-specific design recommendations from the Geotechnical Engineering Report would be necessary to ensure that substantial risks related to subsidence and expansive soils would not occur. Thus, with the implementation of mitigation, 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.

VII-1. *Prior to issuance of grading permits, the City Engineer shall verify that all geotechnical recommendations specified in the Geotechnical Engineering Investigation prepared for the Project are properly incorporated in the Project design, including recommendations related to expansive soils.*

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 City's 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. Per 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 County 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.

Ground-disturbing activities associated with the Project could potentially result in the uncovering of paleontological resources. However, implementation of Mitigation Measure VII-2, as adopted from Mitigation Measure 5.6.5 of the General Plan EIR, would ensure that the Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. The General Plan EIR concluded that buildout of the City, including the Project site, would result in a less-than-significant impact to paleontological resources, given implementation of Mitigation Measure 5.6.5. Thus, a ***less-than-significant*** impact would occur with implementation of mitigation.

Mitigation Measure(s)

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

VII-2. *Before the start of any earthmoving activities, the Project applicant 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 Planning Division

shall be immediately notified. The Project applicant shall 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 shall be implemented by the applicant before construction activities resume in the area where the paleontological resources were discovered.

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?	☐	✖	☐	☐

a,b. Emissions of greenhouse gases (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 level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the Project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development 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), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the Project would be mobile source emissions. 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, Assembly Bill (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 Senate Bill (SB) 32. SB 32 codified emissions reduction targets for the year 2030, which had previously been established by Executive Order B-30-15.

Per 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.[15] 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

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

> documents may rely on an EIR containing a programmatic analysis of greenhouse 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. The CAP includes per capita GHG emissions targets for the City, which include the following: 7.6 $MTCO_2e$/yr by 2020; 4.1 $MTCO_2e$/yr by 2030; and 1.4 $MTCO_2e$/yr by 2050. The CAP targets are not intended to be used as thresholds of significance for individual project emissions under CEQA. Rather, the targets presented in the CAP are community-wide goals intended to demonstrate the City's consistency with the State's GHG reduction targets set forth in AB 32 and SB 32. 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.

For informational purposes, GHG emissions resulting from construction and operations of the proposed Project were modeled using the CalEEMod emissions model under the same assumptions as discussed in Section III, Air Quality, of this IS/MND. The CO_2 intensity factor within CalEEMod was adjusted to reflect SMUD's progress towards achieving the State's Renewable Portfolio Standard (RPS) goals. Construction and operations of the proposed Project and the associated GHG emissions are discussed below, and all modeling outputs are included in Appendix A to this IS/MND.

Construction GHG Emissions

Construction-related GHG emissions constitute a temporary release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. Nonetheless, total construction-related GHG emissions were estimated to be 1,119.18 $MTCO_2e$. Such emissions would be released over the course of the approximately two-year construction period. As noted above, the emissions estimates presented herein are for disclosure purposes only and do not affect the conclusions of this analysis.

Operational GHG Emissions

The emissions of GHGs resulting from operations of the proposed Project were estimated using CalEEMod, and are presented in Table 5 below. As shown in the table, the anticipated per capita GHG emission rate for the first operational year (2024) would be 3.55 $MTCO_2e$/yr, which falls below the 2020 and 2030 GHG targets set forth in the CAP.

As noted in the CAP, the 2020 and 2030 targets are the primary focus of this CAP, and the City's long-term 2050 goal is not a specific reduction target that can or must be met currently in local plans. The results are presented for informational purposes only, because, as discussed above, the determination of significance for operational emissions is based on consistency with the City's CAP.

Table 5
Maximum Unmitigated Operational GHG Emissions

Operational Emission Source	Annual GHG Emissions ($MTCO_2e$/yr)
Area	2.12
Energy	159.88
Mobile	1,059.93
Solid Waste	59.38
Water	11.71
Total Annual Operational GHG Emissions[1]	**1,293.03**
GHG Emissions per Capita[2]	**3.55 $MTCO_2e$/yr/resident**

[1] Rounding may result in small differences in summation.
[2] 1,293.03 $MTCO_2e$/yr / 364 residents = 3.55 $MTCO_2e$/yr/resident

Source: CalEEMod, November 2020 (see Appendix A).

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. While the proposed project includes a General Plan Amendment request, Table 6 demonstrates that the VMT generated by the project would be less than that which was anticipated for the site in the General Plan and associated CAP. Thus, the project can rely upon the CAP for assessment of GHG emissions.

Table 6, below, presents a consistency discussion for each of the applicable CAP measures.

Table 6
Elk Grove CAP Consistency

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.	Consistent with measure BE-4, the Project applicant has indicated that the proposed homes would comply with CALGreen Tier 1 standards. Implementation of Mitigation Measure VIII-1 would ensure compliance with this measure.
BE-5. Building Stock: Phase in Zero Net Energy Standards in New Construction Phase in zero net energy (ZNE) standards for new construction, beginning in 2020 for residential Projects and 2030 for commercial Projects. Specific phase-in requirements and ZNE compliance standards will be supported by updates in	The 2019 CBSC has begun phasing in ZNE requirements by requiring residential projects to meet 100% of their electricity needs through rooftop solar. The proposed single-family residences will include rooftop solar to meet 100% of the project's electricity demand. Therefore, the Project will comply with this measure.

the triennial building code updates, beginning with the 2019 update.	
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.	Consistent with measure BE-6, the Project applicant has indicated that all homes would be entirely electric, and would not include any natural gas infrastructure. Implementation of Mitigation Measure VIII-1 would ensure compliance with this measure.
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 2019 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 would comply 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 would include construction of low-density residential uses. However, existing bus stops located along both sides of Power Inn Road and Sheldon Road in the Project vicinity would provide future residents of the Project with reasonably convenient access to transit. Overall, the Project would generally comply 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 2014, the City adopted the Bicycle, Pedestrian, and Trails Master Plan. As noted therein, Class II bike lanes are currently available along Sheldon Road and Power Inn Road. Such bike lanes connect to the City-wide network of bike trails. Future bike trails are planned along Auberry Drive, which is located west of the Project site. 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. The Project would provide for attached sidewalks along all of the proposed internal roadways. In addition, paved sidewalks currently exist along Power Inn Road and Sheldon Road, and marked crosswalks are available at the signalized Power Inn Road/Sheldon Road intersection. The Project would not alter the existing sidewalks and bike lanes located along the Project frontages at Power Inn Road and Sheldon Road. As such, the Project would comply 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.	A 15% reduction in VMT from existing (2015) conditions is demonstrated by conformance with the General Plan's land use and cumulative VMT limits. The land use VMT limit for Low Density Residential is 21.2 VMT per service population. This project would result in a VMT per service population of 15.4, thus, meeting the land use VMT limit. In addition, the Project would result in a total VMT of 5,608 daily vehicle-miles, and if the site were built-out with commercial uses, per the existing zoning designation, the site would generate a total VMT of 13,430 daily vehicle-miles. As such, the Project would result in 7,822 fewer daily vehicle-miles as compared to the existing zoning designation, which was assessed in the General Plan EIR. Therefore, the Project would result in a net decrease in VMT, and the Citywide cumulative limit of 6,367,833 VMT would not be exceeded.
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.	Consistent with measure TACM-8, the Project applicant has indicated that at least 25 percent of the construction equipment would be EPA-rated Tier 4 Final. Considering construction would occur from 2020 through 2022 and would be completed prior to 2030, the Project would not be required to use entirely Tier 4 Final construction equipment. Implementation of Mitigation Measure VIII-1 would ensure compliance with the general intent of 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(B), 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. December 2019.	

As shown above, the Project would comply with most measures presented within the CAP. However, consistency with several measures cannot be ensured at this time.

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. Therefore, given that consistency with all applicable measures within the CAP cannot be ensured at this time, the Project could conflict with implementation of the City's CAP. However, with the implementation of mitigation, 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, and 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.

VIII-1. *Prior to issuance of building permits, Project 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 Development Services 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-6: The Project shall include all-electric appliances and HVAC systems.*
- *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).*

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. Residential and commercial land uses are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents may use 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 amount utilized on the site, routine use of such products would not represent a substantial risk to public health or the environment. In addition, the City provides a special waste collection center for the proper disposal of household hazardous wastes.

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 and local City ordinances 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),[16] 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.

Existing On-Site Hazardous Materials

Per a Phase I Environmental Site Assessment (ESA) prepared for the Project site by Wallace-Kuhl & Associates (Appendix E),[17] the Project site has remained a vacant, grass-covered lot since at least 1894. The site does not contain any recognized environmental conditions (RECs) such as stressed vegetation, septic systems, wells, above-ground storage tanks (ASTs), or underground storage tanks (USTs). An existing power pole, previously used for a construction trailer that was present on the Project site during construction of nearby off-site homes, is located on the southeastern portion of the Project site; however, the Phase I ESA did not identify any hazards associated with the power pole. A preliminary vapor encroachment condition (VEC) screening was conducted by WKA. The preliminary screening included performing a Search Distance Test to identify whether any known or suspected contaminated properties exist within a specific search radius surrounding the Project site, and a Chemicals of Concern Test to evaluate whether any associated chemicals are likely to be present on the Project site. Based on the results of the preliminary screening analysis, VECs are not likely to exist on-site and would not pose a risk to the proposed development.

Conclusion

Construction activities would be required to adhere to all relevant guidelines and ordinances regulating the handling, storage, and transportation of hazardous materials. In addition, known hazardous materials have not been identified on the Project site. Thus, the Project would not 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, and a ***less-than-significant*** impact would occur.

c. The Project site is located approximately 450 feet (0.09 mile) southeast of Roy Herburger Elementary School. However, as discussed above, hazardous materials would not be emitted during construction or operation of the Project. Therefore, the Project would have ***no impact*** related to hazardous emissions or the handling of hazardous or acutely

[16] 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.

[17] Wallace-Kuhl & Associates. *Phase I Environmental Site Assessment, Sheldon Grove Subdivision, Power Inn Road and Sheldon Road, Elk Grove, California, WKA No. 12865.01.* August 12, 2020.

hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. Per the State Water Resources Control Board (SWRCB) GeoTracker data management system, the Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[18] 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 private use Borges-Clarksburg Airport, located approximately 5.75 miles west of the site. As such, the Project 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 multijurisdictional Sacramento County Local Hazard Mitigation Plan (LHMP), last updated in 2016.[19] 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.

With the exception of minor modifications to the existing Sheldon Road median along the Project frontage, the Project would not alter the existing roadway configuration in the Project vicinity. Thus, the Project would not physically interfere with the LHMP or the EOP, particularly with identified emergency routes.

Based on the above, 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 (FHSZs).[20] In addition, the Project site is surrounded by existing development and is located within an urban area of the City. Thus, the potential for wildland fires to reach the Project site would be relatively limited. Furthermore, all new development within the Project site would be required per the California Fire Code to incorporate ignition resistant construction standards such as ignition-resistant materials and design to resist the intrusion of flame or embers projected by a vegetation fire (wildfire exposure).

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 a ***less-than-significant*** impact would occur.

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[18] State Water Resources Control Board. *GeoTracker*. Available at: https://geotracker.waterboards.ca.gov/. Accessed August 2020.
[19] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.8-13]. February 2019.
[20] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.11-1]. February 2019.

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 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 Best Management Practices (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 would disturb greater than one acre of land, the Project would be subject to the requirements of the State's General Construction Permit.

Operation

The proposed residential uses would not involve operations typically associated with the generation or discharge of polluted water. Thus, typical operations on the Project site would not violate any water quality standards or waste discharge requirements, nor degrade water quality. However, 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.

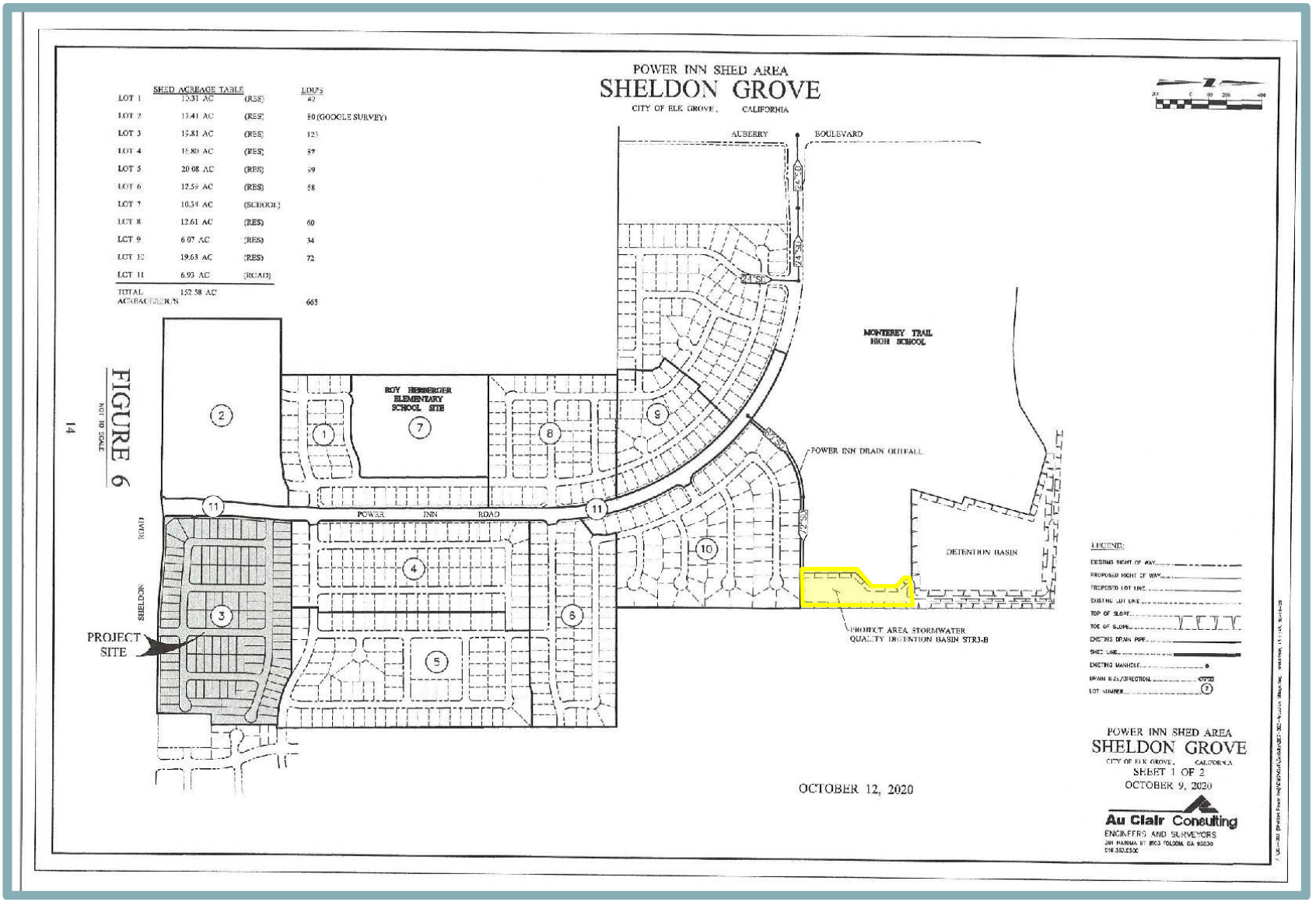
The NPDES discharge requirements address waste discharge, such as stormwater, from municipal separate storm sewer systems (MS4s).[21] The City jointly participates as an MS4 permittee, together with Citrus Heights, Folsom, Galt, Rancho Cordova, Sacramento, and the County of Sacramento. NPDES permit terms are five years. 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 would incorporate low-impact development (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. Compliance with the MS4 permit, as regulated through Chapter 15.12 of the City's Municipal Code, would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the Project.

A Drainage Study has been prepared for the Project by Au Clair Consulting, Inc. to verify that the Project would comply with all stormwater requirements related to water quality.[22] To address stormwater treatment, the Project would include both on-site and off-site treatment measures. The on-site stormwater treatment features would include disconnected roof drains and interceptor trees.

The Project site is part of the Arcadian Village II Special Plan Area, which was approved by the County of Sacramento in 1999. A detention basin was sized and constructed for the overall Arcadian Village II Special Plan Area and is located directly east of Edward Harris, Jr. Middle School, approximately 0.5-mile north of the Project site. Stormwater from the Project site would be directed towards the off-site stormwater detention basin, identified as STR3-B (see Figure 9).

[21] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.9-22]. February 2019.
[22] Au Clair Consulting Inc. *Drainage Study Sheldon Grove Subdivision Elk Grove, CA*. October 12, 2020.

Figure 9
Location of Stormwater Treatment Basin STR3-B



Basin STR3-B was designed and sized to accommodate runoff from the entire shed area, including the Project site, and has capacity to treat 79.6 acre-feet of stormwater. The shed area has been developed consistent with the land uses that were anticipated and approved at the time of the basin's design except for lot 2, which was originally entitled as Commercial Office, but has since been developed as single-family residential. The land use change at lot 2 results in less stormwater discharge volume utilizing the basin than it was designed to accommodate. Similarly, the basin was designed to accommodate runoff from the project site consistent with the currently-approved commercial use, which would generate more runoff as compared to the proposed Project. Considering the Project would result in a 62 percent reduction in stormwater discharge volume, and that the only other land use modifications since the design and construction of the basin also resulted in reduced stormwater discharge volume, the basin would have the capacity to accommodate the flow from the Project. In conclusion, per the Drainage Study, the current basin's storage volume is adequate to hold and treat stormwater generated from the Project.

Conclusion

Based on the Drainage Study prepared for the Project, the Project would comply with all applicable regulations during operations and would be designed to adequately treat stormwater runoff from the site prior to discharge. However, the proposed Project's construction activities could result in an increase in erosion, and consequently affect water quality. Compliance with the foregoing requirements is typically demonstrated through implementation of a SWPPP. 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. With implementation of Mitigation Measures X-1 and X-2, which would ensure that adequate BMPs are incorporated during construction and operation in accordance with SWRCB regulations, the Project would result in a ***less-than-significant*** impact with regard to violation of water quality standards and degradation of water quality.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential 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 RWRCB. 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 Project 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.*

X-2. Prior to issuance of grading permits, the Project improvement plans shall demonstrate, to the satisfaction of the City Engineer, that the Project design is compliant with the City of Elk Grove MS4 permit (Order No. R5-2016-0040-005), consistent with Chapter 15.12 of the City's Municipal Code.

b,e. In 2019, the SCWA prepared a Water Supply Assessment (WSA) for a development project west of the proposed Project. Buildout of the Project site with commercial land uses was accounted for in the water demand calculations within the WSA.[23] As noted in the WSA, water demands associated with the development project and the larger SCWA Zone 40 service area, in which the Project site is located, would be met by conjunctive use of groundwater, surface water, and a small portion of recycled water. 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 Project 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.

Buildout of the Project site with 123 residences, as opposed to buildout of the Project site with commercial uses, would increase water demand by 8.3 acre-feet per year (AFY) from what was accounted for in the WSA.[24] As demonstrated within the WSA, under all scenarios through the year 2040, a sufficient surplus of water supply would be available to accommodate the anticipated increase in water demand due to implementation of the Project. For example, even after three consecutive dry years, the SCWA Zone 40 service area would have a surplus of 4,522 AFY, which is substantially more than the additional 8.3 AFY required for buildout of the Project. As a result, the Project would not substantially decrease groundwater supply.

Pursuant to the WSA, the estimated long term annual sustainable yield of groundwater from the Central Basin is 273,000 AFY. As noted in the General Plan EIR, monitoring and data analysis by the SCGA indicate that subbasin groundwater pumping operations from 2005 through 2017 have not exceeded the sustainable yield conditions set forth in the Water Forum Agreement.

The Project site is relatively small compared to the size of the groundwater basin and, thus, does not constitute a substantial source of groundwater recharge. In addition, the Project would allow some continued infiltration through disconnected roof drains and the off-site stormwater detention basin. Therefore, the Project would not substantially interfere with groundwater recharge.

Based on the above, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, nor would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project would impede sustainable groundwater

[23] Sacramento County Water Agency. *Water Supply Assessment for Sheldon Farms North.* January 2019.
[24] Au Clair Consulting, Inc. *Proposed Sheldon Grove Residential Development Water Supply Memorandum*. November 3, 2020.

management of the basin. Therefore, the proposed Project would result in a ***less-than-significant*** impact.

ci-iii. Development of the Project would result in an increase in impervious surfaces on the Project site, which would alter the existing drainage pattern of the site. Currently, the drain line in Power Inn Road flows from the intersection of Sheldon Road along the Project's western boundary, starting as a 24-inch drain line and increasing to a 36-inch drain line as it moves to the north. The existing 24-inch stub out in Power Inn Road would not align with the proposed east-west street connecting to Power Inn Road. Therefore, as part of the Project, a new manhole is proposed at the intersection of the Project's internal east-west street and Power Inn Road. A new 24-inch stub would be extended from the new manhole into the site.

As part of the Drainage Study that was prepared for the Project, the Project's peak runoff volume was calculated, and an analysis of capacity of existing storm drainage facilities was conducted.[25] The maximum flow was calculated to be 3.8 cubic feet per second (CFS) for the 1-year flow discharging to the existing trunk line in Power Inn Road. Buildout of the Project site under the existing commercial zoning would generate 10 CFS. As such, the proposed change in zoning would result in a 62 percent reduction in discharge from the Project site.

The reduction in drainage volume can be attributed to the difference in permeable surface coverage. Under the currently-approved commercial use, approximately 90 percent of the site is estimated to be covered in impermeable hardscape. The Project would substantially reduce the hardscape coverage with front and rear yard planting and/or the incorporation of permeable surfaces. Given the substantial reduction in the proposed Project design flow compared to the original site design flow, sufficient flow capacity in the drainage system in Power Inn Road is available to convey the proposed Project design flows.

The capacity of the City's existing stormwater drainage infrastructure would not be exceeded, and alterations to such infrastructure would not be needed. In addition, pursuant to Section 15.10.020 of the Municipal Code, the proposed residential development would be subject to payment of monthly drainage fees, to be used by the City for the acquisition, construction, reconstruction, maintenance, and operation of City storm drainage facilities. Furthermore, prior to approval of improvement plans, the Project would be subject to payment of drainage impact fees to the City.

Stormwater runoff would be directed towards off-site detention basin STRB-3. As noted above, per the Project-specific Drainage Study, the basin is adequately sized to accommodate the stormwater runoff that would be generated from the Project.

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, 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. While the Project site is

[25] Au Clair Consulting Inc. *Drainage Study Sheldon Grove Subdivision Elk Grove, CA*. October 12, 2020.

located outside of the Sly Park Dam inundation zone, the site is within the dam failure inundation zone for the Folsom Dam.[26]In 2017, the U.S. Army Corps of Engineers 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) Flood Insurance Rate Map number 06067C0309H, the Project site is located within Zone X.[27] FEMA defines Zone X as an area located outside of the 100-year year floodplain. Thus, the Project would not include any development within a Special Flood Hazard Area, and would not be subject to the flood damage regulations included in Chapter 16.60 of the City's Municipal Code.

Based on the above, the Project would not impede or redirect flood flows. Therefore, ***no impact*** would result.

d. 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 of water such as a lake or reservoir. The Project site is not located within the vicinity of an ocean or a large closed body of water. While Shortline Lake, a small closed body of water, is located south of the Project site, the lake is not of sufficient size to experience the phenomenon of a seiche nor pose a risk of inundation to the site. Thus, the Project site would not be exposed to flooding risks associated with tsunamis or seiches. In addition, as noted above, the Project site is not located within a flood hazard zone. Therefore, ***no impact*** would occur with development of the Project.

[26] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [Figure 5.9-5]. February 2019.
[27] Federal Emergency Management Agency. *National Flood Hazard Layer.* Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed August 2020.

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 Project site does not contain existing housing or other development. In addition, the Project would be compatible with the existing residential uses to the north, east, and west 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 Project site is currently designated CC per the City's General Plan and zoned GC. The proposed Project would include a GPA and Rezone to change the site's land use and zoning designations to LDR and RD-7, respectively. The requested GPA and Rezone are discretionary actions within the purview of the City of Elk Grove City Council.

The various environmental resource evaluations presented throughout this IS/MND provide discussion of potential physical/environmental effects that may result from the proposed land use changes. As discussed throughout this IS/MND, the proposed Project would not result in any significant environmental effects that could not be mitigated to a less-than-significant level. This IS/MND demonstrates that the proposed Project would be consistent with the General Plan policies, as well as other applicable policies and regulations, adopted for the purpose of avoiding or mitigating environmental effects. For example, the proposed Project would comply with the City's Tree Preservation and Protection Ordinance; the noise level standards identified in the General Plan Noise Element (e.g., Policies N-1-1, N-1-5, N-2-2); applicable General Plan policies related to the protection of air quality and reducing greenhouse gas emissions (e.g., Policies NR-4-8, NR-4-9, NR-5-1, NR-6-1, NR-6-5, NR-6-7); and policies related to reducing vehicle miles traveled (Policies MOB-1-1 and MOB-1-3).

Based on the above, the Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect and 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.[28] 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.

[28] 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 following discussion is based on the Environmental Noise Assessment prepared for the proposed Project by Saxelby Acoustics, LLC (Appendix F).[29]

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. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the Project site, the nearest existing noise sensitive land uses include the single-family developments to the west, north, and east of the Project site, the retirement community to the south, and the elementary school located to the northwest, the nearest classrooms of which are located approximately 650 feet from the project site. The nearest noise-sensitive receptor is located approximately 26 feet away from the northern Project site boundary.

Construction Noise

During the construction of the Project, heavy equipment would be used for grading, excavation, paving, and building construction, which could result in temporary noise level increases at nearby sensitive receptors. 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 Project site would vary depending on the proximity of construction activities to that point. Standard construction equipment noise levels are presented in Table 7 below.

As shown in the table, construction activities would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. As noted previously, the nearest existing sensitive receptors are the single-family residences located approximately 26 feet away from the Project site and, thus, could be subjected to noise levels greater than those presented in Table 7.

However, per Section 6.32.100(E) of the City's Municipal Code, noise sources associated with construction are exempt from the City's noise standards, provided such activities only

[29] Saxelby Acoustics. *Environmental Noise Assessment, Sheldon Grove, City of Elk Grove*, California. October 26, 2020.

occur between the hours of 7:00 AM and 7:00 PM when located adjacent to residential uses.[30]

Table 7
Construction Equipment Noise

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill 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: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Section 6.32.100(E) of the 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;

Implementation of Mitigation Measure XIII-1 below specifies standards to reduce noise from construction activities consistent with Section 6.32.100 of the City's Municipal Code. In addition, noise associated with construction activities would be temporary in nature. Pursuant to the General Plan EIR, with application of Section 6.32.100(E) of the City's Municipal Code and General Plan Policy N-1-7 related to construction of City infrastructure, construction noise associated with buildout of the General Plan was determined to be less than significant.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in potential impacts if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered potentially significant.

[30] City of Elk Grove. *Municipal Code, Section 62.32.100.* Current through May 8, 2019.

Operational Noise

The primary source of operational noise associated with implementation of the proposed Project would be traffic noise generated by future residents. Table 8 below presents the significance thresholds that are used for analyzing transportation noise, as established in the City of Elk Grove General Plan Noise Element.

Table 8
Significance of Changes in Noise Exposure

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON).

To assess noise impacts due to Project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, Project and no-Project conditions. Existing and Future noise levels due to traffic are calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Project trip generation volumes were provided by the Project traffic engineer (Kimley Horn, 2020); truck usage and vehicle speeds on the local area roadways were estimated from field observations. The predicted increases in traffic noise levels on the local roadway network for Existing and Future conditions which would result from the Project are provided in terms of the day/night average (L_{dn}) descriptor, as this is consistent with the City's transportation noise standards. Table 9 summarizes the modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the Project area. The last two columns are provided for informational purposes to demonstrate that buildout of the Project site under the commercial zoning designation would result in a greater change in traffic noise levels as compared to buildout of the site pursuant to the proposed Project.

Table 9
Predicted Traffic Noise Level and Project-Related Traffic Noise Level Increases

Roadway	Segment	Ex. No Project	Ex. + Project	Δ	Cu. No Project	Cu. + Project	Δ	Cu. No Project	Cu. (w/ Commercial Development)	Δ
Power Inn Rd.	North of Sheldon Rd.	64.1	64.1	0.0	65.1	65.1	0.0	65.1	65.1	0.0
Sheldon Rd.	East of Power Inn Rd.	65.7	65.8	0.1	65.9	66.0	0.1	65.9	66.4	0.5

Ex. = Existing, Cu. = Cumulative, Δ = Change,
Note: All noise levels are predicted at closest sensitive receptors in terms of dBA, L_{dn}.

Source: Saxelby Acoustics LLC. Environmental Noise Assessment, Sheldon Grove. October 26, 2020.

Based upon the criteria presented in Table 8, where existing traffic noise levels are greater than 65 dB L_{dn}, at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase

in roadway noise levels will be considered significant. As shown in Table 9, the maximum increase in traffic noise at the nearest sensitive receptor is predicted to be 0.1 dBA under the proposed Project. Therefore, impacts resulting from increased traffic noise would be considered less than significant.

Noise Levels at the Proposed Residences

CEQA does not require an analysis of the environment's impact on the Project; however, noise-related effects on future residents of the proposed Project is typically evaluated to determine consistency with the policies set forth in the lead agency's General Plan. While not required under CEQA, the following section regarding off-site traffic noise and adjacent fire station noise effects on future residents is provided for informational purposes. Table 10 and Table 11 present the noise standards used by the City of Elk Grove.

Table 10
Performance Standards for Typical Stationary Noise Sources

Noise Level Descriptor	Daytime (7:00 AM to 10:00 PM)	Nighttime (10:00 PM to 7:00 AM)
Typical Noise Sources – Hourly L_{eq}, dB	55	45
Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music – Hourly L_{eq}, dB	50	40
Source: Elk Grove General Plan, Noise Element, Table 8-4.		

Exterior Noise

Figure 10 shows the exterior transportation noise contours, which illustrate the traffic noise levels that would be heard at the future residences. As shown in the figure, the western and southern boundaries of the Project site would be exposed to exterior transportation noise levels up to approximately 70 dBA L_{dn}, which would exceed the 60 dB limit for outdoor activity areas of new residential uses (see Table 11). In addition, the Cosumnes CSD Fire Station, adjacent to the site's eastern boundary, is predicted to generate noise levels of up to 49 dBA L_{eq} in the outdoor activity area of the adjacent Lot 31, which exceeds the City of Elk Grove nighttime stationary noise standard of 45 dBA Leq (see Table 10). Because exterior noise levels are expected to exceed the allowable standards for the proposed uses, a potentially significant impact could occur.

Interior Noise

Based on the results of the Environmental Noise Assessment, unshielded first floor traffic noise levels up to 68 dBA L_{dn} along Power Inn Road and up to 70 dBA L_{dn} along Sheldon Road could occur. Second floor facades are typically exposed to exterior noise levels two to three dBA higher than first floor facades. Therefore, at the second-floor facades, exterior noise levels up to 71 dBA L_{dn} along Power Inn Road and 73 dBA L_{dn} along Sheldon Road could occur. The aforementioned interior noise levels would exceed the City's interior noise standard of 45 dBA Ldn (see Table 11). Because the interior noise levels are expected to exceed the allowable standards for the proposed uses, a potentially significant impact could occur.

Table 11
Transportation Noise: Land Use Compatibility Standards

Land Use	Outdoor Activity Areas[a,b] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[c]
Residential	60[d,g]	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (the passing of a single train, as opposed to relatively steady noise sources such as roadways)	60[d,g]	40[f]	--
Transient Lodging	60[e,g]	45	--
Hospitals, Nursing Homes	60[d,g]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[d,g]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45

Notes:

a. Where the location of outdoor activity areas is unknown, the exterior noise level standards shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patios or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
b. Transportation Projects subject to Caltrans review or approval shall comply with the Federal Highway Administration noise standards for evaluation and abatement of noise impacts
c. As determined for a typical worst-case hour during periods of use.
d. Where it is not possible to reduce noise in outdoor activity areas to 60dB, L_{dn} or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB, L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
e. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the Project design. In these cases, only the interior noise level criterion will apply.
f. The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.
g. In cases where the existing ambient noise level exceeds 60 dBA, the maximum allowable Project-related permanent increase in ambient noise levels shall be 3 dBA / L_{dn}.

Source: Elk Grove General Plan, Noise Element, Table 8-3.

Conclusion

Based on the above, exterior and interior noise at the proposed residences along the western and southern site boundaries and near the Cosumnes CSD Fire Station could exceed the City's noise level standards. However, such an effect would not be considered an impact under CEQA. In order to address this concern, the City would require the following conditions of approval to ensure consistency with the City's General Plan noise levels standards:

- Prior to approval of Project improvement plans, the plans for the proposed Project shall show that the first-row lots shall be shielded from Power Inn Road and Sheldon Road through the use of minimum six-foot tall masonry sound walls per the approval of the City Engineer. The approximate locations of these barriers are shown on Figure 11. Other types of barrier may be employed but shall be reviewed

by the City and an acoustical engineer prior to being constructed. Additionally, an interior noise analysis shall be prepared by a qualified acoustic engineer outlining the measures required to meet the City's 45 dBA Ldn interior noise standard, especially at unshielded second floor facades.

- Once building plans are available, a detailed interior noise analysis shall be conducted to determine the specific noise control measures required to meet the City's interior noise standard. Required noise control measures would likely include the use of sound transmission class (STC) rated windows in the range of STC 30-35, depending on the amount of window glazing and exterior wall finishes.

Existing sensitive receptors would not experience traffic-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, with the implementation of mitigation, a ***less-than-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 potential impact to a *less-than-significant* level.

XIII-1 *The following measures, when applicable, shall be followed throughout all phases of construction to reduce noise from construction activities and shall be the responsibility of the construction contractor and project applicant:*

- *Construction equipment shall be well maintained and used judiciously to be as quiet as practical. Equip all internal combustion engine--driven equipment with mufflers, which are in good condition and appropriate for the equipment.*
- *Use "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *Locate stationary noise--generating equipment and construction staging areas as far as feasible from sensitive receptors, including neighboring residential uses, when sensitive receptors adjoin or are near a construction area.*
- *Prohibit unnecessary idling of internal combustion engines.*
- *Designate a "construction liaison" who shall be responsible for responding to any local complaints about construction noise. The liaison shall determine the cause of the noise complaints (e.g., starting too early, bad muffler, or similar failure to use best practices) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.*
- *Hold a pre-construction meeting with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, construction schedule, and noise coordinator) are completed.*

Figure 10
Transportation Noise

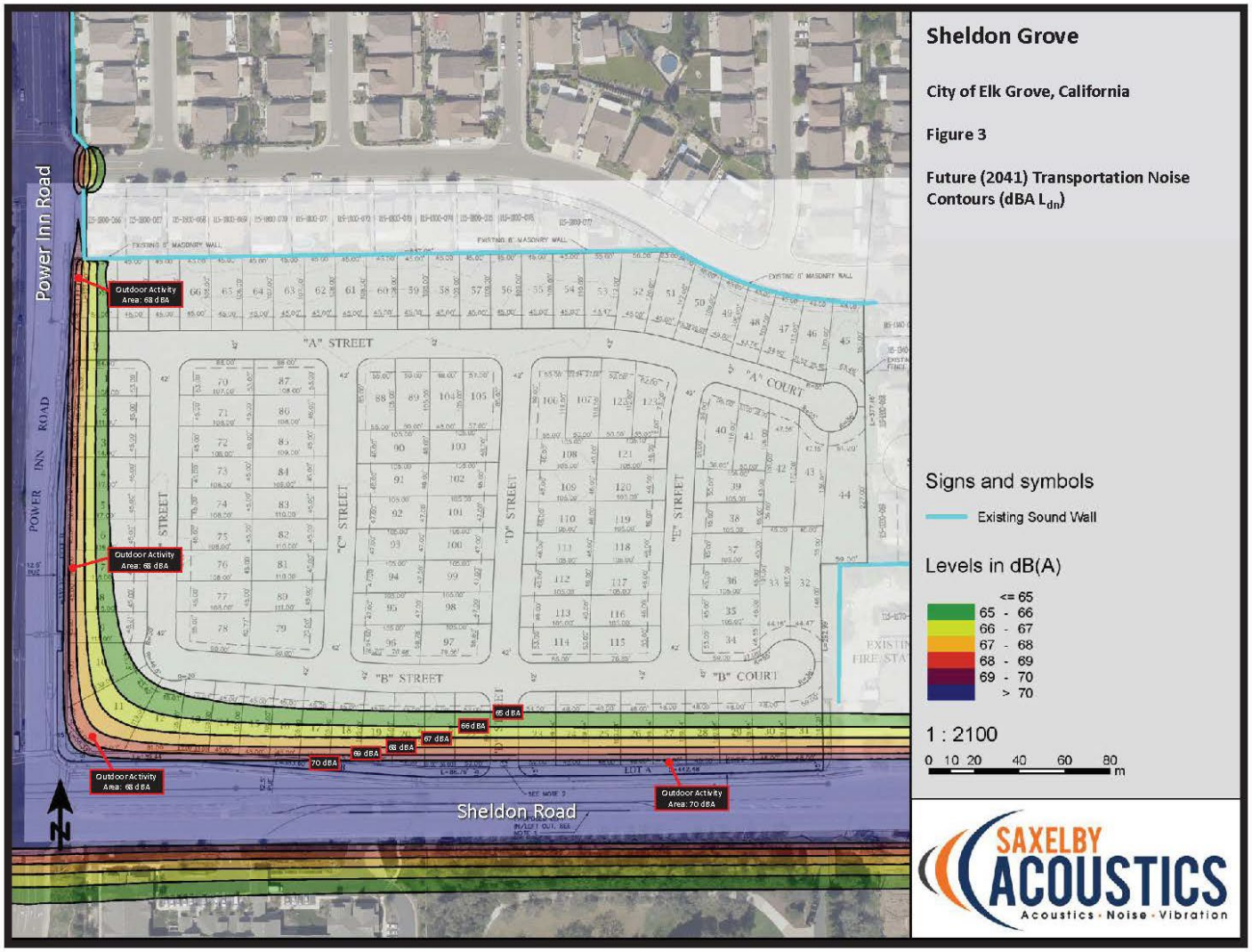
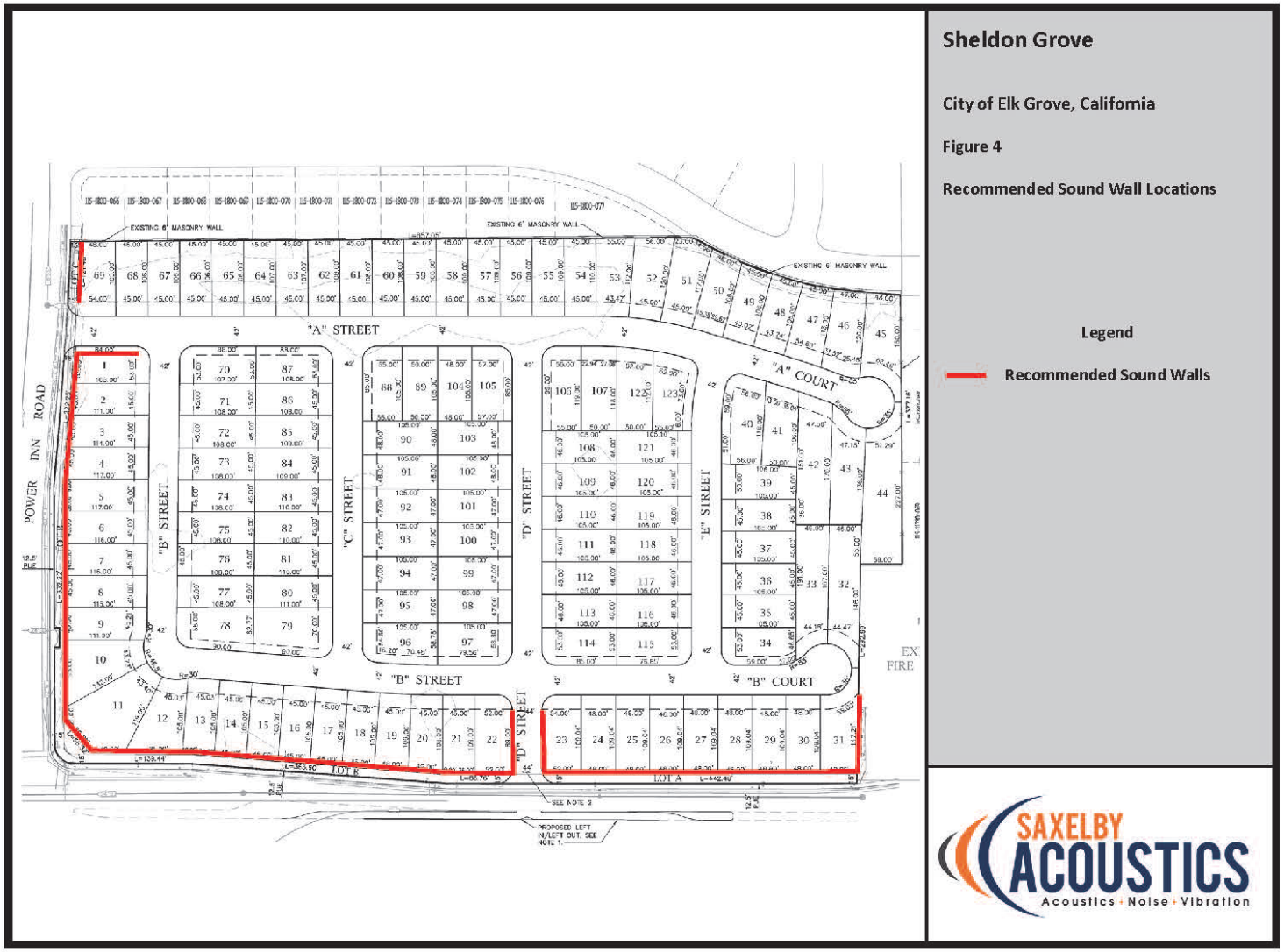


Figure 11
Recommended Sound Wall Locations



b. Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures 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. Table 12 presents the effects of vibration on people and buildings. As shown in the table, and as noted in the City of Elk Grove General Plan Noise Element Policy N-1-9, the threshold of significance for architectural damage to structures is 0.20 in/sec ppv.

During Project construction, heavy equipment would be used for grading, excavation, paving, and building construction, 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 13 below.

The nearest existing sensitive receptors are the single-family residences located approximately 26 feet away from the site at the closest point. Based on the typical vibration levels shown in the table above, construction activities associated with the Project would not exceed 0.20 PPV at 26 feet away.

Table 12
Effects of Vibration on People and Buildings

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
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 13
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)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/Roller	0.210 (< 0.20 at 26 feet)	0.074	0.026

Source: Transit Noise and Vibration Impact Assessment Guidelines. Federal Transit Administration. May 2006.

Based on the above, the Project would not result in the exposure of persons to or generation of excessive groundborne vibration levels at the Project site. Additionally, 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 City's Municipal Code. Therefore, a ***less-than-significant*** impact would occur related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

c. The nearest airport to the Project site is the private use Borges-Clarksburg Airport, located approximately 5.75 miles west of the site. Given the substantial distance between the airport and the Project site, noise levels resulting from aircraft at the nearest airport would be negligible at the site. Therefore, ***no impact*** would occur related to exposing people residing or working in the Project area to excessive airport-related noise levels.

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 would include the development of 123 single-family residential units. Per the General Plan EIR, the average household size for the City in 2017 was 3.29 persons per household.[31] Thus, the Project would accommodate an estimated 405 future residents (3.29 persons/household X 123 dwelling units).[32] Per the City's General Plan EIR, buildout of the General Plan is anticipated to result in the construction of approximately 48,102 new homes within the City's Planning Area. While the Project site was not identified for buildout with residential uses in the General Plan, the total number of new residential units constructed as part of the Project would represent only 0.26 percent of the growth anticipated in the General Plan. Thus, the Project would not be considered to result in substantial unplanned population growth.

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. As discussed in Section XV, Public Services, of this IS/MND, construction of new or expanded public services facilities would not be necessary to serve the Project. Per Section XIX, Utilities and Service Systems, the Project would not include construction of substantial new off-site utility infrastructure or expansion of existing utilities.

Based on the above, while the Project would result in population growth, such growth could be accommodated by existing public services and infrastructure and would not result in significant adverse environmental effects. Thus, a ***less-than-significant*** impact would occur related to inducing 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. The Project 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

[31] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 3.0-2]. February 2019.

[32] This population estimate is slightly higher than the population figure used to calculate VMT per capita in Section XVII, Transportation, of this IS/MND. The higher population estimate of 405 residents is used in this IS/MND when assessing impacts to housing, utilities, and service systems in order to present the most conservative analysis. By using the smaller population estimate (364) to calculate VMT per capita, this IS/MND applies the most conservative numbers throughout the analysis.

existing housing or people, would not necessitate the construction of replacement housing elsewhere, and ***no impact*** would occur.

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).[33] Services include fire suppression, emergency medical services, technical rescue, and arson and explosion investigations. The CCSD has 175 personnel in its Operations Division and operates out of eight fire stations with eight advanced life support engine companies, one aerial ladder truck company, seven rescue ambulance units, and one command vehicle, as well as other specialized apparatus for specialized emergency circumstances.[34] In 2018, the CCSD responded to 19,790 incidents, an increase from the prior four years.[35] The nearest fire station to the Project site is Fire Station 76, located at 8545 Sheldon Road, directly east 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 76, new fire stations would not be required in order to provide adequate fire protection service to the Project site.

In addition, the Project would be subject to payment of a fire impact fee in accordance with Section 16.95.050 of the City's 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 Code requirements.

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

34 Cosumnes Fire Department. *Operations Division*. Available at: https://www.yourcsd.com/469/Operations-Division. Accessed August 2020.

35 Cosumnes Fire Department. *2018 Annual Report*. 2020.

Based on the above, the Project would have 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. As of 2017, the EGPD has an authorized strength of 141 sworn officers and 86 civilian personnel and responds to an average of 52,000 calls for service per year. In addition to the EGPD, the California Highway Patrol (CHP) 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 State Route 99.

The General Plan EIR concluded that while buildout of the Planning Area would result 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 Project site for commercial development, as compared to the residential development proposed for the Project, the Project would not result in substantially increased demands for law enforcement services relative to buildout of the site under the current CC land use designation.

New staff and equipment necessary to provide law enforcement services to new development would be funded by the City's Capital Facilities Fee levied on new development, as well as ongoing payments of property taxes. Payment of the Capital Facilities Fee would be required per Chapter 16.95 of the Municipal Code.

Given required payment of the City's Capital Facilities Fee, consistent with Chapter 16.95 of the City's 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 Elk Grove Unified School District (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.

The Project would include the development of the Project site with a total of 123 residential units and, thus, would increase demand for school facilities and services. 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. Currently, the CCSD manages 98 parks, 18 miles of off-street trails, two community centers, four recreation centers, and two aquatics complexes. Within the City of Elk Grove, as of 2016, a total of 883.3 acres of parkland are available. The nearest existing park is the Karamanos Park, located approximately 650 feet north of the Project site.

The CCSD parkland standards, Section 22.40.032 of the City's 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.

In total, the Project would provide for a total of 0.616 acres of public open space within the proposed landscaped corridors (Lots A, B, and C). As discussed in Section XIV, Population and Housing, of this IS/MND, the Project would house an estimated 405 future residents. Thus, in order to meet the City's parkland standard of five acres per 1,000 residents, the Project is required to provide a minimum of 2.025 acres of parkland on-site. Given that the Project would include only 0.616 acres of dedicated parkland, payment of an in-lieu fee would be required pursuant to Section 22.40.040 of the City's Municipal Code.

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 under Section XV, Public Services, of this IS/MND, parks and recreation services within the City are provided through the CCSD's Parks and Recreation Department. Within the City of Elk Grove, as of 2016, a total of 883.3 acres of parkland are available. The CCSD parkland standards, Chapter 22.40 of the City's 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 XV, Public Services, of this IS/MND, in order to meet the City's parkland standard of five acres per 1,000 residents, the Project is required to provide a minimum of 2.025 acres of parkland on-site. Given that the Project would include only 0.616 acres of dedicated parkland, payment of an in-lieu fee would be required pursuant to Section 22.40.040 of the City's Municipal Code. Consistent with Section 22.40.040, the Project applicant would be required to pay the applicable in-lieu fees at the time of the recording of the Final Subdivision Map, which would ensure that the Project would meet the City's park standards.

Based on the above, the increase in population associated with the Project would not be expected to 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. Thus, 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. This section discusses any potential conflict between the Project and any applicable programs, plans, ordinances, or policy addressing the circulation system. This includes all modes of transportation, including transit, roadway, bicycle, and pedestrian facilities.

Consistency with General Plan Policies - Intersection Control

The City's General Plan establishes performance targets for intersections. Table 14 identifies the City's Intersection Performance Targets by intersection type. It should be noted that the City may allow deviations from the targets below, if necessary, as part of project approval.

Table 14
Vehicular Design Considerations: Intersection Performance Targets

Intersection Control	Intersection Control (Delay in Seconds)
Stop (Side-Street & All-Way)	< 35.1
Signal	< 55.1
Roundabout	< 35.1

Source: Elk Grove General Plan Mobility Element, Table 6-3. February 2019.

The Project would be conditioned to pay towards the City's Roadway Fee Program, which provides fair-share funding towards projects that improve traffic operations and construct eligible roadway facilities identified in the General Plan.

As part of the VMT Evaluation that was prepared for the Project by Kimley-Horn, intersection performance was evaluated for consistency with the City's performance targets. [36] Per the City's request, the analysis focused on the Sheldon Road intersection with Power Inn Road/Garrity Drive under Existing and Existing plus Project Conditions. The results of the evaluation are presented in Table 15.

[36] Kimley Horn. *Sheldon Grove Revised Vehicle Miles Traveled (VMT) Evaluation & Intersection Operations*. September 8, 2020

Table 15
Intersection Performance Target Evaluation

Intersection	Control	Peak Hour	Existing Delay (sec)	Existing plus Sheldon Grove Delay (sec)	Existing plus Sheldon Grove (Modified) Delay (sec)
Sheldon Road at Power Inn Road/ Garrity Drive	Signal	AM	53.5	**60.1**	46.2
		PM	19.8	22.3	16.9

Source: Kimley-Horn, Inc. September 8, 2020.

As shown in Table 15, the addition of the proposed Project would result in an AM peak-hour intersection delay (60.1 seconds) that exceeds the established performance target for a signalized intersection (less than 55.1 seconds). Therefore, the Project has the potential to conflict with the General Plan performance standards related to intersection control.

Prior project analysis has identified that in the cumulative conditions, continued development in 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, 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(b).

Consistency with 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.

Transit service within the study area is provided by the City's e-Tran transit service, which operates seven local routes within Elk Grove and ten commuter routes with service to Downtown Sacramento and Rancho Cordova. Four bus stops are located within 100 feet of the Project site boundary: Power Inn Road at Villenueve Drive, Power Inn Road at Sheldon Road, Sheldon Road at Power Inn Road, and Sheldon Road at Summer Point Drive. Due to the close proximity of several bus stops and the City-wide availability of public transit, the Project would have sufficient access to transit services.

In 2014, the City adopted the Bicycle, Pedestrian, and Trails Master Plan. As noted therein, Class II bike lanes are currently available along Sheldon Road and Power Inn Road. Such bike lanes connect to the City-wide network of bike trails. Future bike trails are planned along Auberry Drive, which is located west of the Project site. 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.

Per the Project site plans, five-foot sidewalks would be provided along all internal roadways. In addition, paved sidewalks currently exist along Power Inn Road and Sheldon Road, and marked crosswalks are available at the signalized Power Inn Road/Sheldon

Road intersection. As noted previously, the Project would not alter the existing sidewalks and bike lanes provided along the site frontages. As such, the Project would provide access to pedestrian facilities within the Project site and connections to the existing off-site pedestrian network.

Conclusion

Based on the above, the Project would be consistent with City plans related to bicycle, pedestrian, and transit service and facilities. However, because the Project would result in intersection performance that exceeds the City's performance standards at the intersection of Sheldon Road at Power Inn Road/Garrity Drive, the Project could conflict with the General Plan performance standards related to intersection control. However, implementation of Mitigation Measure XVII-1 would ensure that improvements are included as part of the Project to maintain allowable intersection performance. In addition, required payment towards the Roadway Fee Program and I-5 Subregional Fee would help ensure that the project contributes towards regional traffic improvements. Overall, impacts related to a conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities would be ***less-than-significant*** with mitigation incorporated.

Mitigation Measure(s)

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

XVII-1(a) *Prior to the approval of any building permits, the following improvements to the Sheldon Road at Power Inn Road/Garrity Drive intersection shall be added to the development plans:*

1. *Addition of a southbound right-turn overlap signal phase; and*
2. *Restriction of the eastbound u-turn movement (to avoid conflict with the southbound right-turn overlap).*

Plans shall be submitted for review to the City of Elk Grove Development Services Department.

XVII-1(b) *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 City's Municipal Code. Receipt of payment shall be provided to the City of Elk Grove Planning Division.*

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a Project's transportation impacts. Pursuant to Section 15064.3 of the CEQA Guidelines, analysis of VMT attributable to a Project is the most appropriate measure of transportation impacts. 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 the 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).

The City's VMT limit for a Low Density Residential land use is 21.2 VMT per capita.

A Project-specific VMT Evaluation was prepared by Kimley-Horn to quantify the anticipated VMT per capita for the proposed residential development and compare the findings to the City of Elk Grove's established thresholds.[37] VMT was calculated using the methods provided in the City's Transportation Analysis Guidelines and compared to the City's established VMT thresholds.[38] Kimley-Horn used the City's General Plan travel demand model to perform the VMT analysis. A Traffic Analysis Zone (TAZ) was created to isolate the proposed Project from the surrounding land uses. A total of 123 residential units were added to the Project's TAZ to represent the Project. Using the output trip table from the travel demand model, automobile trips either starting or ending in the proposed Project were selected. Trips were then factored based on auto occupancy in a manner consistent with the City's guidelines, and each trip was multiplied by the model-determined distance.

A Revised VMT Evaluation was subsequently prepared for the Project to analyze VMT associated with the proposed development as compared to the anticipated VMT that would occur if the site were built out pursuant to the existing land use designation.[39] The purpose of the Revised VMT Evaluation was to determine if the proposed rezone from GC to RD-7 would result in a net increase in VMT. The modeling results from both evaluations are presented in Table 16.

Table 16
Proposed Project VMT Analysis Summary

Land Use	Trip Type	Internal VMT	External VMT	Total VMT
Proposed Project (Residential)	Origin	2,586	262	2,848
	Destination	2,502	258	2,760
	Total	**5,088**	**521**	**5,608**
			Total Population	**364**
			VMT Per Capita	***15.4***
Existing Zoning (Commercial)	Origin	5,377	1,201	6,577
	Destination	5,657	1,196	6,853
	Total	**11,033**	**2,397**	**13,430**
			Net Change in VMT	***-7,822***
Source: Kimley-Horn, Inc. September 8, 2020.				

As shown in the table, the Project is expected to generate 15.4 VMT per capita, which is below the City's threshold of 21.2 VMT for capita for the proposed land use. Therefore, the Project would not result in a significant impact related to VMT per capita.

[37] Kimley-Horn. *Sheldon Grove Vehicle Miles Traveled (VMT) Evaluation*. July 24, 2020.
[38] City of Elk Grove. *Transportation Analysis Guidelines.* February 2019.
[39] Kimley-Horn. *Sheldon Grove Revised Vehicle Miles Traveled (VMT) Evaluation & Intersection Operations*. September 8, 2020

In addition, the Project would result in a total VMT of 5,608 daily vehicle-miles, and if the site were built-out with commercial uses, per the existing zoning designation, the site would generate a total VMT of 13,430 daily vehicle-miles. As such, the Project would result in 7,822 fewer daily vehicle-miles as compared to the existing zoning designation, which was assessed in the General Plan EIR. Therefore, the Project would result in a net decrease in VMT, and the Citywide limit of 6,367,833 VMT would not be exceeded.

Based on the above, the Project would not conflict with the City's VMT per capita thresholds nor the VMT limits established by General Plan Policy MOB-1-1. Therefore, a ***less-than-significant*** impact would occur.

c. The proposed Project would not include design features that would affect traffic safety, nor involve any incompatible uses. The Project would involve the construction of an internal roadway network, Streets A through F, to connect the proposed residences to Sheldon Road and Power Inn Road. The Sheldon Road median would be reconstructed to provide a left turn lane in and left turn lane out with raised curbs at the proposed F Street. In addition, the F Street right-of-way would be 48 feet, which would accommodate an 11-foot travel lane in each direction and a ten-foot right turn lane on the southbound side. As such, the proposed roadways and intersections would be designed to avoid sharp turns or dangerous intersections.

Based on the above, significant adverse impacts related to roadway design features or incompatible uses would not result from implementation of the proposed Project, and a ***less-than-significant*** impact would occur.

d. During Project construction, public roads in the vicinity would remain open and available for use by emergency vehicles and other traffic. In addition, the new internal roadway would provide two points of access to the Project site, which would be adequate for emergency vehicle access. As such, the proposed Project would include an on-site road of appropriate size to accommodate emergency vehicles, and a ***less-than-significant*** impact to emergency access 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, the Project site does not contain any existing structures or any other known resources listed or eligible for listing in the CHRIS, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), and does not contain known resources that could be considered historic pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Furthermore, based on the results of a search of the Native American Heritage Commission (NAHC) Sacred Lands File, the Project site does not contain any known Tribal Cultural Resources.[40] This conclusion is also supported by the lack of historic waterways within the site's vicinity, as waterways were often frequented by tribes.

In compliance with Assembly Bill (AB) 52 (Public Resources Code Section 21080.3.1), on September 21, 2020, the City provided formal notification letters to local tribes that had requested notification. One tribe, the Shingle Springs Band of Miwok Indians, requested to receive updates throughout the planning process. None of the other tribes requested further consultation, and none of the contacted tribes identified any specific tribal cultural resources on the Project site.

Based on the above, known tribal cultural resources do not exist within the Project site. Nevertheless, the possibility exists that previously unknown 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.

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 potential impact to a *less-than-significant* level.

[40] Native American Heritage Commission. *Native American Consultation, Pursuant to Senate Bill 18, Government Code §65352.3 and §65352.4, Sheldon Grove Project, Sacramento County.* September 17, 2020.

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

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 the Sacramento Area Sewer District (SASD), which is a contributing agency to the Sacramento Regional County Sanitation District (Regional San). The SASD owns, operates, and maintains a network of 107 pump stations and approximately 80 miles of pressurized force main pipes.[41] SASD trunk sewer pipes function as conveyance facilities to transport the collected wastewater flows to the Regional San interceptor system. The existing City trunk line extends southeast from the Sacramento Regional Wastewater Treatment Plant (SRWTP) influent diversion structure to Laguna Boulevard, then parallel to SR 99 along East Stockton Boulevard, extending close to the southern boundary of the City of Elk Grove.

Currently, an eight-inch sanitary sewer stub is located approximately 715 feet north of Sheldon Road in Power Inn Road. As part of the Project, the existing eight-inch stub would be abandoned, and a new eight-inch line in Power Inn Road would be extended into the proposed subdivision. The on-site sanitary sewer system would consist of a series of eight-inch lines throughout the site and within the new access road, and would connect to the existing eight-inch line within Power Inn Road.

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

A Sanitary Sewer Memorandum was prepared for the Project to verify that the proposed development would not result in significant impacts to wastewater infrastructure.[42] Design flows were developed for both the site demand under the existing land use designation (i.e. commercial development) and the new demand for the proposed single-family development. The flow demand if the site were built out as currently designated would be 0.086 million gallons per day (mgd). Under the proposed Project, the anticipated flow demand would be 0.094 mgd. Per the Sanitary Sewer Memorandum, the increase in peak flow is not considered significant, and the anticipated peak flow of 0.094 mgd is well within the design capacity of 0.39 mgd of the existing sewer conveyance line in Power Inn Road. As such, the existing discharge line has sufficient capacity to convey the new design flows.

Furthermore, per the SASD Sewer Ordinance, the Project would be subject to payment of the SASD's applicable sewer impact fees, which are used to fund needed sewer system maintenance and improvements.[43] Sewer impact fees are due prior to issuance of building permits for commercial and residential structures. Therefore, a less-than-significant impact would occur related to construction of new or expanded wastewater facilities.

Wastewater Treatment

Pursuant to the General Plan EIR, the SRWTP treats an average of 181 mgd. Wastewater is treated by accelerated physical and natural biological processes before discharge to the Sacramento River. The SRWTP's reliable capacity is currently limited, based on hydraulic considerations, to an equivalent 207 mgd average dry weather flow (ADWF). The SRWTP has been master planned to accommodate 350 mgd ADWF following planned improvements. In addition, Regional San has prepared a long-range master plan for the large-diameter interceptors that transport wastewater to the SRWTP. The master plan includes interceptor upgrades/expansions to accommodate anticipated growth through 2035.[44]

Per the SRWTP's NPDES Permit (No. CA0077682), adopted in April of 2016, the ADWF at that time was approximately 120 mgd.[45] As such, the SRWTP was operating at approximately 63 percent of permitted capacity. Therefore, adequate capacity exists to treat the additional 0.094 mgd of ADWF that would be generated by the proposed Project, which is a net increase of only 0.008 mgd over the amount anticipated for the site in the General Plan.

Furthermore, as noted above, 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 SRWTP. Required payment of sewer impact fees would ensure that the SRWTP receives adequate funding for necessary future improvements.

Based on the above, the proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

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42 Au Clair Consulting, Inc. *Proposed Sheldon Grove Residential Development Sanitary Sewer Memorandum*. October 22, 2020.
43 Sacramento Area Sewer District. *Sewer Ordinance.* January 10, 2018.
44 City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-27]. February 2019.
45 California Regional Water Quality Control Board, Central Valley Region. Order No. R5-2016-0020-01 NPDES No. CA0077682 [pg I-7]. April 2016.

Water Supply Infrastructure

Water supply to the proposed development would be provided by the SCWA. Currently, a 12-inch waterline is provided within Power Inn Road along the Project site frontage. A 12-inch water line was stubbed into the Project site approximately 700 feet north of the intersection with Sheldon Road, and a 12-inch waterline is provided within Sheldon Road.

As part of the Project, a new on-site water system would consist of the extension of waterlines from both entrances and looped through all of the proposed streets. The proposed loop system for the Project would likely be eight-inch distribution lines, pending confirmation from the District. Given that the Project would connect to existing water supply lines located in the immediate Project vicinity, construction of substantial off-site water supply infrastructure would not be required.

A Water Supply Memorandum was prepared for the Project to verify that the existing water conveyance infrastructure would be sufficient to serve the proposed Project.[46] As noted previously, the Project site is currently designated for commercial use. The commercial standards have a base line requirement that is higher in flow requirements as compared to the requirement for residential land uses. For example, for the proposed residential development, the design fire flow would be 1,500 gallons per minute (GPM), whereas the commercial standard fire flow would be 3,000 GPM. It should be noted that the final design pressures and flows will be confirmed at final design.

Based on the Water Supply Memorandum, the existing water conveyance system in Power Inn Road and Sheldon Road is sufficient to serve the proposed development. Therefore, a less-than-significant impact would occur related to construction of new or expanded water supply facilities.

Stormwater Infrastructure

The Project site is currently undeveloped vacant land with ruderal vegetation. Completion of the Project would increase site runoff due to the introduction of impervious surfaces to the site. As discussed in further detail in Section X, Hydrology and Water Quality, of this IS/MND, the Project would include on-site stormwater treatment strategies, including disconnected roof drains and interceptor trees. All additional runoff would be directed towards an off-site bio-retention facility sized to exceed the minimum volume requirement necessary to adequately manage all runoff from the proposed impervious surfaces. Because the existing bio-retention facility is designed with adequate capacity to capture and treat runoff from proposed impervious surfaces, the Project would not generate runoff in excess of the City's existing stormwater system's capacity. Therefore, the Project would have 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

As noted previously, the Project would not involve the installation of any natural gas features and, thus, would not include connections to natural gas infrastructure. The Project site is located within a developed area of the City of Elk Grove and is situated within close proximity to existing electric power and telecommunications facilities. Thus, substantial

[46] Au Clair Consulting, Inc. *Proposed Sheldon Grove Residential Development Water Supply Memorandum*. November 3, 2020.

expansion of such off-site utilities would not be required to serve the proposed development, and associated environmental effects would not occur.

Conclusion

Therefore, 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.

b. Per the General Plan EIR, 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.[47] 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.

In 2016, the SCWA prepared the 2015 UWMP as required by the Urban Water Management Planning Act of 1983. The UWMP serves as a long-term planning document for sustainable water supply, and includes a description of water sources, historical and Projected water use, and a comparison of water supply and demand during normal and dry years. The UWMP has identified regional water demand in normal, single dry, and multiple dry years in five-year increments. The water demand Projections are based on buildout of the service area per the City's General Plan land use designations, with full buildout anticipated to occur after the year 2040.

Table 17 and Table 18 show the Projected water supply and demand totals during a normal year and during a single dry year, respectively. Table 19 shows the Projected supply and demand totals under multiple dry year conditions for the first, second, and third years.

Table 17
Supply and Demand Assessment: Normal Year (AFY)

	2020	2025	2030	2035	2040
Supply totals	82,900	82,900	87,900	97,900	97,900
Demand totals	48,121	55,490	63,288	71,143	79,278
Difference	*34,779*	*27,410*	*24,612*	*26,757*	*18,622*

Source: Sacramento County Water Agency, 2015 Urban Water Management Plan, May 2016.

Table 18
Supply and Demand Assessment: Single Dry Year (AFY)

	2020	2025	2030	2035	2040
Supply totals	70,200	70,500	74,600	83,600	83,800
Demand totals	48,121	55,490	63,288	71,143	79,278
Difference	*22,079*	*15,010*	*11,312*	*12,457*	*4,522*

Source: Sacramento County Water Agency, 2015 Urban Water Management Plan, May 2016.

[47] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-1]. February 2019.

Table 19
Supply and Demand Assessment: Multiple Dry Years (AFY)

		2020	2025	2030	2035	2040
1st Year	Supply Totals	77,900	77,900	81,900	90,900	90,900
	Demand Totals	48,121	55,490	63,288	71,143	79,278
	Difference	*29,779*	*22,410*	*18,612*	*19,757*	*11,622*
2nd Year	Supply Totals	77,900	77,900	81,900	90,900	90,900
	Demand Totals	48,121	55,490	63,288	71,143	79,278
	Difference	*29,779*	*22,410*	*18,612*	*17,757*	*11,622*
3rd Year	Supply Totals	70,200	70,500	74,600	83,600	83,800
	Demand Totals	48,121	55,490	63,288	71,143	79,278
	Difference	*22,079*	*15,010*	*11,312*	*12,457*	*4,522*

Source: Sacramento County Water Agency, 2015 Urban Water Management Plan, May 2016.

As shown above, per the 2015 UWMP, the SCWA has projected a surplus of at least 4,522 AFY for average year, single dry year, and multiple dry year conditions.

Development of the proposed residential subdivision would result in increased demand for water supplies relative to existing conditions. Based on the Water Supply Memorandum prepared the Project, the Project would generate approximately 48.3 AFY of potable water demand. Given the SCWA's surplus of at least 4,522 AFY, the proposed Project's estimated increase in water demand could be accommodated by the SCWA's water supplies without new or expanded entitlements.

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.

Based on the above, sufficient water supplies would be available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Consequently, a ***less-than-significant*** impact would occur.

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 have over 70 percent available remaining capacity.[48] As of 2017, the ten landfills had a combined remaining capacity of over 501 million cubic yards.

Once constructed, the proposed residences would generate solid waste. Per the CalRecycle Jurisdiction Diversion/Disposal Rate Summary for Elk Grove, the most recent (2018) annual per capita disposal rate is 3.3 pounds per day (PPD) per resident.[49] Given that the proposed Project would house approximately 405 future residents, operation of the proposed Project would generate approximately 1,336.5 PPD.

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

[48] City of Elk Grove. *General Plan Update Draft Environmental Impact Report* [pg. 5.12-32]. February 2019.
[49] CalRecycle. *Jurisdiction Diversion/Disposal Rate Summary (2007 – Current)*. Available at: https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006. Accessed October 2020.

disposal needs. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the Project.

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 Project site is not located within or near a Very High Fire Hazard Severity Zone or State Responsibility Area.[50] As such, the proposed Project would not be expected to be subject to or result in substantial adverse effects related to wildfires, and a ***less-than-significant*** impact would occur.

[50] California Department of Forestry and Fire Protection. *Sacramento County, Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE*. July 30, 2008.

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 burrowing owl, Swainson's hawk, northern harrier, loggerhead shrike, and other migratory birds and raptors protected by the MBTA to occur on-site, Mitigation Measures IV-1 through IV-3 would ensure that impacts to special-status species would be less than significant. The Project site is undeveloped and does not contain any known historic or prehistoric resources. Thus, implementation of the proposed Project is not anticipated to have the potential to result in impacts related to historic or prehistoric resources. Nevertheless, Mitigation Measures V-1, V-2, and V-3 would ensure that, in the event that historic or prehistoric resources are discovered within the Project site during construction activities, such resources are protected in compliance with the requirements of CEQA.

Considering the above, the proposed 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 would include generation of vehicle trips on area roadways, the cumulative 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 and substantially reduced from what was planned for the site in the General Plan. In addition, as noted in Section VIII-1, Mitigation Measure VIII-1 would ensure Project consistency 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 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 would comply 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, Hazards and Hazardous Materials, Greenhouse Gas Emissions, and Noise sections of this IS/MND, the proposed 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

AIR QUALITY AND GHG MODELING RESULTS

Sheldon Grove Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.96	Acre	3.96	172,497.60	0
Single Family Housing	123.00	Dwelling Unit	15.24	221,400.00	328

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	369.3538933	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor adjusted per SMUD RPS Projections.

Land Use - Acreage updated based on site plan.

Construction Phase - Phase timing based on applicant-provided information.

Grading - Total acres graded based on site plan.

Vehicle Trips - Trip rate adjusted to match Kimley-Horn Memorandum.

Mobile Land Use Mitigation -

Area Mitigation - Applicant has indicated that no hearths would be installed.

Energy Mitigation - Title 24 exceedance and on-site renewable electricity generation represent compliance with 2019 CBSC.

Water Mitigation - Water conservation strategy applied to represent compliance with MWELO and CalGreen.

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	476.00
tblConstructionPhase	NumDays	300.00	476.00
tblConstructionPhase	NumDays	30.00	24.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	10/14/2022	4/20/2023
tblConstructionPhase	PhaseEndDate	8/19/2022	4/6/2023
tblConstructionPhase	PhaseEndDate	6/25/2021	6/7/2021
tblConstructionPhase	PhaseEndDate	9/16/2022	6/9/2021
tblConstructionPhase	PhaseEndDate	5/14/2021	5/4/2021
tblConstructionPhase	PhaseStartDate	9/17/2022	6/24/2021
tblConstructionPhase	PhaseStartDate	6/26/2021	6/10/2021
tblConstructionPhase	PhaseStartDate	5/15/2021	5/5/2021
tblConstructionPhase	PhaseStartDate	8/20/2022	6/8/2021
tblGrading	AcresOfGrading	60.00	19.81
tblLandUse	LotAcreage	39.94	15.24
tblProjectCharacteristics	CO2IntensityFactor	590.31	369.3538933
tblVehicleTrips	ST_TR	9.91	10.23
tblVehicleTrips	SU_TR	8.62	10.23
tblVehicleTrips	WD_TR	9.52	10.23

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.6666	2.3280	2.0960	4.4500e-003	0.1952	0.1048	0.3000	0.0763	0.0984	0.1747	0.0000	394.8672	394.8672	0.0709	0.0000	396.6402
2022	1.0927	2.7679	2.9207	6.4000e-003	0.1648	0.1180	0.2829	0.0446	0.1117	0.1562	0.0000	568.7050	568.7050	0.0840	0.0000	570.8044
2023	0.3140	0.6729	0.7691	1.7000e-003	0.0446	0.0274	0.0719	0.0121	0.0259	0.0379	0.0000	151.1931	151.1931	0.0219	0.0000	151.7416
Maximum	**1.0927**	**2.7679**	**2.9207**	**6.4000e-003**	**0.1952**	**0.1180**	**0.3000**	**0.0763**	**0.1117**	**0.1747**	**0.0000**	**568.7050**	**568.7050**	**0.0840**	**0.0000**	**570.8044**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.6666	2.3280	2.0960	4.4500e-003	0.1952	0.1048	0.3000	0.0763	0.0984	0.1747	0.0000	394.8669	394.8669	0.0709	0.0000	396.6399
2022	1.0927	2.7679	2.9207	6.4000e-003	0.1648	0.1180	0.2829	0.0446	0.1117	0.1562	0.0000	568.7047	568.7047	0.0840	0.0000	570.8040
2023	0.3140	0.6729	0.7691	1.7000e-003	0.0446	0.0274	0.0719	0.0121	0.0259	0.0379	0.0000	151.1930	151.1930	0.0219	0.0000	151.7415
Maximum	**1.0927**	**2.7679**	**2.9207**	**6.4000e-003**	**0.1952**	**0.1180**	**0.3000**	**0.0763**	**0.1117**	**0.1747**	**0.0000**	**568.7047**	**568.7047**	**0.0840**	**0.0000**	**570.8040**

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-1-2021**	**7-31-2021**	1.2502	1.2502
2	**8-1-2021**	**10-31-2021**	1.0556	1.0556
3	**11-1-2021**	**1-31-2022**	1.0308	1.0308
4	**2-1-2022**	**4-30-2022**	0.9449	0.9449
5	**5-1-2022**	**7-31-2022**	0.9749	0.9749
6	**8-1-2022**	**10-31-2022**	0.9758	0.9758
7	**11-1-2022**	**1-31-2023**	0.9535	0.9535
8	**2-1-2023**	**4-30-2023**	0.6775	0.6775
		Highest	1.2502	1.2502

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0549	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218
Energy	0.0171	0.1464	0.0623	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	343.5729	343.5729	0.0169	5.9400e-003	345.7644
Mobile	0.3173	1.3266	3.7260	0.0129	1.2034	0.0101	1.2135	0.3225	9.4100e-003	0.3319	0.0000	1,190.4025	1,190.4025	0.0520	0.0000	1,191.7033
Waste						0.0000	0.0000		0.0000	0.0000	23.9692	0.0000	23.9692	1.4165	0.0000	59.3826
Water						0.0000	0.0000		0.0000	0.0000	2.8354	9.6523	12.4876	0.0105	6.3200e-003	14.6347
Total	**1.3894**	**1.4877**	**5.0563**	**0.0139**	**1.2034**	**0.0290**	**1.2324**	**0.3225**	**0.0283**	**0.3508**	**26.8045**	**1,545.6997**	**1,572.5042**	**1.4980**	**0.0123**	**1,613.6069**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0549	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218
Energy	0.0161	0.1372	0.0584	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.9369	158.9369	3.0500e-003	2.9100e-003	159.8814
Mobile	0.3041	1.2469	3.3868	0.0115	1.0614	9.0700e-003	1.0705	0.2845	8.4500e-003	0.2929	0.0000	1,058.7531	1,058.7531	0.0472	0.0000	1,059.9328
Waste						0.0000	0.0000		0.0000	0.0000	23.9692	0.0000	23.9692	1.4165	0.0000	59.3826
Water						0.0000	0.0000		0.0000	0.0000	2.2683	7.7218	9.9901	8.4100e-003	5.0600e-003	11.7078
Total	**1.3751**	**1.3987**	**4.7131**	**0.0125**	**1.0614**	**0.0272**	**1.0886**	**0.2845**	**0.0266**	**0.3110**	**26.2375**	**1,227.4839**	**1,253.7213**	**1.4772**	**7.9700e-003**	**1,293.0264**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.03**	**5.98**	**6.79**	**10.62**	**11.80**	**6.11**	**11.67**	**11.80**	**6.01**	**11.33**	**2.12**	**20.59**	**20.27**	**1.39**	**34.99**	**19.87**

3.0 Construction Detail

Construction Phase

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2021	5/4/2021	5	2	
2	Grading	Grading	5/5/2021	6/7/2021	5	24	
3	Building Construction	Building Construction	6/10/2021	4/6/2023	5	476	
4	Paving	Paving	6/8/2021	6/9/2021	5	2	
5	Architectural Coating	Architectural Coating	6/24/2021	4/20/2023	5	476	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19.81

Acres of Paving: 3.96

Residential Indoor: 448,335; Residential Outdoor: 149,445; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,350 (Architectural Coating – sqft)

OffRoad Equipment

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	117.00	41.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	9.9300e-003	0.0000	9.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8900e-003	0.0405	0.0212	4.0000e-005		2.0400e-003	2.0400e-003		1.8800e-003	1.8800e-003	0.0000	3.3436	3.3436	1.0800e-003	0.0000	3.3706
Total	**3.8900e-003**	**0.0405**	**0.0212**	**4.0000e-005**	**0.0181**	**2.0400e-003**	**0.0201**	**9.9300e-003**	**1.8800e-003**	**0.0118**	**0.0000**	**3.3436**	**3.3436**	**1.0800e-003**	**0.0000**	**3.3706**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1131	0.1131	0.0000	0.0000	0.1132
Total	**6.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1131**	**0.1131**	**0.0000**	**0.0000**	**0.1132**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	9.9300e-003	0.0000	9.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8900e-003	0.0405	0.0212	4.0000e-005		2.0400e-003	2.0400e-003		1.8800e-003	1.8800e-003	0.0000	3.3436	3.3436	1.0800e-003	0.0000	3.3706
Total	**3.8900e-003**	**0.0405**	**0.0212**	**4.0000e-005**	**0.0181**	**2.0400e-003**	**0.0201**	**9.9300e-003**	**1.8800e-003**	**0.0118**	**0.0000**	**3.3436**	**3.3436**	**1.0800e-003**	**0.0000**	**3.3706**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1131	0.1131	0.0000	0.0000	0.1132
Total	**6.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1131**	**0.1131**	**0.0000**	**0.0000**	**0.1132**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0828	0.0000	0.0828	0.0409	0.0000	0.0409	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0503	0.5568	0.3705	7.4000e-004		0.0238	0.0238		0.0219	0.0219	0.0000	65.3940	65.3940	0.0212	0.0000	65.9227
Total	**0.0503**	**0.5568**	**0.3705**	**7.4000e-004**	**0.0828**	**0.0238**	**0.1066**	**0.0409**	**0.0219**	**0.0628**	**0.0000**	**65.3940**	**65.3940**	**0.0212**	**0.0000**	**65.9227**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	5.4000e-004	6.0700e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5086	1.5086	4.0000e-005	0.0000	1.5096
Total	**8.3000e-004**	**5.4000e-004**	**6.0700e-003**	**2.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5086**	**1.5086**	**4.0000e-005**	**0.0000**	**1.5096**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0828	0.0000	0.0828	0.0409	0.0000	0.0409	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0503	0.5568	0.3705	7.4000e-004		0.0238	0.0238		0.0219	0.0219	0.0000	65.3939	65.3939	0.0212	0.0000	65.9226
Total	**0.0503**	**0.5568**	**0.3705**	**7.4000e-004**	**0.0828**	**0.0238**	**0.1066**	**0.0409**	**0.0219**	**0.0628**	**0.0000**	**65.3939**	**65.3939**	**0.0212**	**0.0000**	**65.9226**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-004	5.4000e-004	6.0700e-003	2.0000e-005	1.7600e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.5086	1.5086	4.0000e-005	0.0000	1.5096
Total	**8.3000e-004**	**5.4000e-004**	**6.0700e-003**	**2.0000e-005**	**1.7600e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.5086**	**1.5086**	**4.0000e-005**	**0.0000**	**1.5096**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1397	1.2813	1.2183	1.9800e-003		0.0705	0.0705		0.0662	0.0662	0.0000	170.2534	170.2534	0.0411	0.0000	171.2803
Total	**0.1397**	**1.2813**	**1.2183**	**1.9800e-003**		**0.0705**	**0.0705**		**0.0662**	**0.0662**	**0.0000**	**170.2534**	**170.2534**	**0.0411**	**0.0000**	**171.2803**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4800e-003	0.3083	0.0824	7.4000e-004	0.0176	8.5000e-004	0.0185	5.0900e-003	8.1000e-004	5.9100e-003	0.0000	70.7102	70.7102	4.0400e-003	0.0000	70.8112
Worker	0.0298	0.0195	0.2177	6.0000e-004	0.0632	4.4000e-004	0.0636	0.0168	4.1000e-004	0.0172	0.0000	54.0547	54.0547	1.4200e-003	0.0000	54.0901
Total	**0.0393**	**0.3277**	**0.3000**	**1.3400e-003**	**0.0808**	**1.2900e-003**	**0.0821**	**0.0219**	**1.2200e-003**	**0.0231**	**0.0000**	**124.7648**	**124.7648**	**5.4600e-003**	**0.0000**	**124.9014**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1397	1.2813	1.2183	1.9800e-003		0.0705	0.0705		0.0662	0.0662	0.0000	170.2532	170.2532	0.0411	0.0000	171.2801
Total	**0.1397**	**1.2813**	**1.2183**	**1.9800e-003**		**0.0705**	**0.0705**		**0.0662**	**0.0662**	**0.0000**	**170.2532**	**170.2532**	**0.0411**	**0.0000**	**171.2801**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4800e-003	0.3083	0.0824	7.4000e-004	0.0176	8.5000e-004	0.0185	5.0900e-003	8.1000e-004	5.9100e-003	0.0000	70.7102	70.7102	4.0400e-003	0.0000	70.8112
Worker	0.0298	0.0195	0.2177	6.0000e-004	0.0632	4.4000e-004	0.0636	0.0168	4.1000e-004	0.0172	0.0000	54.0547	54.0547	1.4200e-003	0.0000	54.0901
Total	**0.0393**	**0.3277**	**0.3000**	**1.3400e-003**	**0.0808**	**1.2900e-003**	**0.0821**	**0.0219**	**1.2200e-003**	**0.0231**	**0.0000**	**124.7648**	**124.7648**	**5.4600e-003**	**0.0000**	**124.9014**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2428**	**301.2428**	**0.0722**	**0.0000**	**303.0471**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5177	0.1344	1.2900e-003	0.0312	1.3200e-003	0.0325	9.0000e-003	1.2600e-003	0.0103	0.0000	123.9662	123.9662	6.9500e-003	0.0000	124.1399
Worker	0.0492	0.0310	0.3538	1.0200e-003	0.1117	7.6000e-004	0.1125	0.0297	7.0000e-004	0.0304	0.0000	92.1824	92.1824	2.2600e-003	0.0000	92.2388
Total	**0.0648**	**0.5487**	**0.4881**	**2.3100e-003**	**0.1429**	**2.0800e-003**	**0.1450**	**0.0387**	**1.9600e-003**	**0.0407**	**0.0000**	**216.1486**	**216.1486**	**9.2100e-003**	**0.0000**	**216.3787**

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	**0.2218**	**2.0300**	**2.1272**	**3.5000e-003**		**0.1052**	**0.1052**		**0.0990**	**0.0990**	**0.0000**	**301.2425**	**301.2425**	**0.0722**	**0.0000**	**303.0467**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5177	0.1344	1.2900e-003	0.0312	1.3200e-003	0.0325	9.0000e-003	1.2600e-003	0.0103	0.0000	123.9662	123.9662	6.9500e-003	0.0000	124.1399
Worker	0.0492	0.0310	0.3538	1.0200e-003	0.1117	7.6000e-004	0.1125	0.0297	7.0000e-004	0.0304	0.0000	92.1824	92.1824	2.2600e-003	0.0000	92.2388
Total	**0.0648**	**0.5487**	**0.4881**	**2.3100e-003**	**0.1429**	**2.0800e-003**	**0.1450**	**0.0387**	**1.9600e-003**	**0.0407**	**0.0000**	**216.1486**	**216.1486**	**9.2100e-003**	**0.0000**	**216.3787**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0543	0.4963	0.5604	9.3000e-004		0.0241	0.0241		0.0227	0.0227	0.0000	79.9726	79.9726	0.0190	0.0000	80.4482
Total	**0.0543**	**0.4963**	**0.5604**	**9.3000e-004**		**0.0241**	**0.0241**		**0.0227**	**0.0227**	**0.0000**	**79.9726**	**79.9726**	**0.0190**	**0.0000**	**80.4482**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2600e-003	0.1161	0.0316	3.4000e-004	8.2700e-003	1.7000e-004	8.4300e-003	2.3900e-003	1.6000e-004	2.5500e-003	0.0000	32.2907	32.2907	1.6500e-003	0.0000	32.3320
Worker	0.0122	7.3900e-003	0.0862	2.6000e-004	0.0297	2.0000e-004	0.0298	7.8800e-003	1.8000e-004	8.0700e-003	0.0000	23.5451	23.5451	5.4000e-004	0.0000	23.5586
Total	**0.0155**	**0.1235**	**0.1178**	**6.0000e-004**	**0.0379**	**3.7000e-004**	**0.0383**	**0.0103**	**3.4000e-004**	**0.0106**	**0.0000**	**55.8358**	**55.8358**	**2.1900e-003**	**0.0000**	**55.8905**

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0543	0.4963	0.5604	9.3000e-004		0.0241	0.0241		0.0227	0.0227	0.0000	79.9725	79.9725	0.0190	0.0000	80.4482
Total	**0.0543**	**0.4963**	**0.5604**	**9.3000e-004**		**0.0241**	**0.0241**		**0.0227**	**0.0227**	**0.0000**	**79.9725**	**79.9725**	**0.0190**	**0.0000**	**80.4482**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2600e-003	0.1161	0.0316	3.4000e-004	8.2700e-003	1.7000e-004	8.4300e-003	2.3900e-003	1.6000e-004	2.5500e-003	0.0000	32.2907	32.2907	1.6500e-003	0.0000	32.3320
Worker	0.0122	7.3900e-003	0.0862	2.6000e-004	0.0297	2.0000e-004	0.0298	7.8800e-003	1.8000e-004	8.0700e-003	0.0000	23.5451	23.5451	5.4000e-004	0.0000	23.5586
Total	**0.0155**	**0.1235**	**0.1178**	**6.0000e-004**	**0.0379**	**3.7000e-004**	**0.0383**	**0.0103**	**3.4000e-004**	**0.0106**	**0.0000**	**55.8358**	**55.8358**	**2.1900e-003**	**0.0000**	**55.8905**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0129	0.0147	2.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	2.0024	2.0024	6.5000e-004	0.0000	2.0185
Paving	5.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4500e-003**	**0.0129**	**0.0147**	**2.0000e-005**		**6.8000e-004**	**6.8000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**2.0024**	**2.0024**	**6.5000e-004**	**0.0000**	**2.0185**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0943	0.0943	0.0000	0.0000	0.0944
Total	**5.0000e-005**	**3.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0943**	**0.0943**	**0.0000**	**0.0000**	**0.0944**

3.5 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0129	0.0147	2.0000e-005		6.8000e-004	6.8000e-004		6.2000e-004	6.2000e-004	0.0000	2.0024	2.0024	6.5000e-004	0.0000	2.0185
Paving	5.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4500e-003**	**0.0129**	**0.0147**	**2.0000e-005**		**6.8000e-004**	**6.8000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**2.0024**	**2.0024**	**6.5000e-004**	**0.0000**	**2.0185**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0943	0.0943	0.0000	0.0000	0.0944
Total	**5.0000e-005**	**3.0000e-005**	**3.8000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0943**	**0.0943**	**0.0000**	**0.0000**	**0.0944**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4056					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1046	0.1245	2.0000e-004		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	17.4898	17.4898	1.2000e-003	0.0000	17.5198
Total	**0.4206**	**0.1046**	**0.1245**	**2.0000e-004**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**17.4898**	**17.4898**	**1.2000e-003**	**0.0000**	**17.5198**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4600e-003	3.5700e-003	0.0399	1.1000e-004	0.0116	8.0000e-005	0.0117	3.0800e-003	7.0000e-005	3.1500e-003	0.0000	9.9033	9.9033	2.6000e-004	0.0000	9.9098
Total	**5.4600e-003**	**3.5700e-003**	**0.0399**	**1.1000e-004**	**0.0116**	**8.0000e-005**	**0.0117**	**3.0800e-003**	**7.0000e-005**	**3.1500e-003**	**0.0000**	**9.9033**	**9.9033**	**2.6000e-004**	**0.0000**	**9.9098**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4056					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1046	0.1245	2.0000e-004		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	17.4898	17.4898	1.2000e-003	0.0000	17.5198
Total	**0.4206**	**0.1046**	**0.1245**	**2.0000e-004**		**6.4500e-003**	**6.4500e-003**		**6.4500e-003**	**6.4500e-003**	**0.0000**	**17.4898**	**17.4898**	**1.2000e-003**	**0.0000**	**17.5198**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4600e-003	3.5700e-003	0.0399	1.1000e-004	0.0116	8.0000e-005	0.0117	3.0800e-003	7.0000e-005	3.1500e-003	0.0000	9.9033	9.9033	2.6000e-004	0.0000	9.9098
Total	**5.4600e-003**	**3.5700e-003**	**0.0399**	**1.1000e-004**	**0.0116**	**8.0000e-005**	**0.0117**	**3.0800e-003**	**7.0000e-005**	**3.1500e-003**	**0.0000**	**9.9033**	**9.9033**	**2.6000e-004**	**0.0000**	**9.9098**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7698					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**0.7964**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6800e-003	6.0800e-003	0.0695	2.0000e-004	0.0220	1.5000e-004	0.0221	5.8400e-003	1.4000e-004	5.9800e-003	0.0000	18.1213	18.1213	4.4000e-004	0.0000	18.1324
Total	**9.6800e-003**	**6.0800e-003**	**0.0695**	**2.0000e-004**	**0.0220**	**1.5000e-004**	**0.0221**	**5.8400e-003**	**1.4000e-004**	**5.9800e-003**	**0.0000**	**18.1213**	**18.1213**	**4.4000e-004**	**0.0000**	**18.1324**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7698					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.1831	0.2358	3.9000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	33.1923	33.1923	2.1600e-003	0.0000	33.2463
Total	**0.7964**	**0.1831**	**0.2358**	**3.9000e-004**		**0.0106**	**0.0106**		**0.0106**	**0.0106**	**0.0000**	**33.1923**	**33.1923**	**2.1600e-003**	**0.0000**	**33.2463**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6800e-003	6.0800e-003	0.0695	2.0000e-004	0.0220	1.5000e-004	0.0221	5.8400e-003	1.4000e-004	5.9800e-003	0.0000	18.1213	18.1213	4.4000e-004	0.0000	18.1324
Total	**9.6800e-003**	**6.0800e-003**	**0.0695**	**2.0000e-004**	**0.0220**	**1.5000e-004**	**0.0221**	**5.8400e-003**	**1.4000e-004**	**5.9800e-003**	**0.0000**	**18.1213**	**18.1213**	**4.4000e-004**	**0.0000**	**18.1324**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0854	10.0854	6.0000e-004	0.0000	10.1004
Total	**0.2415**	**0.0515**	**0.0715**	**1.2000e-004**		**2.8000e-003**	**2.8000e-003**		**2.8000e-003**	**2.8000e-003**	**0.0000**	**10.0854**	**10.0854**	**6.0000e-004**	**0.0000**	**10.1004**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	1.6600e-003	0.0194	6.0000e-005	6.6700e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.2993	5.2993	1.2000e-004	0.0000	5.3024
Total	**2.7500e-003**	**1.6600e-003**	**0.0194**	**6.0000e-005**	**6.6700e-003**	**4.0000e-005**	**6.7200e-003**	**1.7700e-003**	**4.0000e-005**	**1.8200e-003**	**0.0000**	**5.2993**	**5.2993**	**1.2000e-004**	**0.0000**	**5.3024**

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2339					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.0515	0.0715	1.2000e-004		2.8000e-003	2.8000e-003		2.8000e-003	2.8000e-003	0.0000	10.0853	10.0853	6.0000e-004	0.0000	10.1004
Total	**0.2415**	**0.0515**	**0.0715**	**1.2000e-004**		**2.8000e-003**	**2.8000e-003**		**2.8000e-003**	**2.8000e-003**	**0.0000**	**10.0853**	**10.0853**	**6.0000e-004**	**0.0000**	**10.1004**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	1.6600e-003	0.0194	6.0000e-005	6.6700e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8200e-003	0.0000	5.2993	5.2993	1.2000e-004	0.0000	5.3024
Total	**2.7500e-003**	**1.6600e-003**	**0.0194**	**6.0000e-005**	**6.6700e-003**	**4.0000e-005**	**6.7200e-003**	**1.7700e-003**	**4.0000e-005**	**1.8200e-003**	**0.0000**	**5.2993**	**5.2993**	**1.2000e-004**	**0.0000**	**5.3024**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3041	1.2469	3.3868	0.0115	1.0614	9.0700e-003	1.0705	0.2845	8.4500e-003	0.2929	0.0000	1,058.7531	1,058.7531	0.0472	0.0000	1,059.9328
Unmitigated	0.3173	1.3266	3.7260	0.0129	1.2034	0.0101	1.2135	0.3225	9.4100e-003	0.3319	0.0000	1,190.4025	1,190.4025	0.0520	0.0000	1,191.7033

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,258.29	1,258.29	1258.29	3,228,909	2,847,898
Total	1,258.29	1,258.29	1,258.29	3,228,909	2,847,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
Single Family Housing	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	174.0005	174.0005	0.0137	2.8300e-003	175.1843
NaturalGas Mitigated	0.0161	0.1372	0.0584	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.9369	158.9369	3.0500e-003	2.9100e-003	159.8814
NaturalGas Unmitigated	0.0171	0.1464	0.0623	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	169.5724	169.5724	3.2500e-003	3.1100e-003	170.5801

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	3.17767e+006	0.0171	0.1464	0.0623	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	169.5724	169.5724	3.2500e-003	3.1100e-003	170.5801
Total		**0.0171**	**0.1464**	**0.0623**	**9.3000e-004**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**169.5724**	**169.5724**	**3.2500e-003**	**3.1100e-003**	**170.5801**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	2.97837e+006	0.0161	0.1372	0.0584	8.8000e-004		0.0111	0.0111		0.0111	0.0111	0.0000	158.9369	158.9369	3.0500e-003	2.9100e-003	159.8814
Total		**0.0161**	**0.1372**	**0.0584**	**8.8000e-004**		**0.0111**	**0.0111**		**0.0111**	**0.0111**	**0.0000**	**158.9369**	**158.9369**	**3.0500e-003**	**2.9100e-003**	**159.8814**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.03858e+006	174.0005	0.0137	2.8300e-003	175.1843
Total		**174.0005**	**0.0137**	**2.8300e-003**	**175.1843**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0549	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218
Unmitigated	1.0549	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1409					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0381	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218
Total	**1.0549**	**0.0146**	**1.2680**	**7.0000e-005**		**7.0300e-003**	**7.0300e-003**		**7.0300e-003**	**7.0300e-003**	**0.0000**	**2.0721**	**2.0721**	**1.9900e-003**	**0.0000**	**2.1218**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1409					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8758					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0381	0.0146	1.2680	7.0000e-005		7.0300e-003	7.0300e-003		7.0300e-003	7.0300e-003	0.0000	2.0721	2.0721	1.9900e-003	0.0000	2.1218
Total	**1.0549**	**0.0146**	**1.2680**	**7.0000e-005**		**7.0300e-003**	**7.0300e-003**		**7.0300e-003**	**7.0300e-003**	**0.0000**	**2.0721**	**2.0721**	**1.9900e-003**	**0.0000**	**2.1218**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.9901	8.4100e-003	5.0600e-003	11.7078
Unmitigated	12.4876	0.0105	6.3200e-003	14.6347

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8.01395 / 5.05227	12.4876	0.0105	6.3200e-003	14.6347
Total		**12.4876**	**0.0105**	**6.3200e-003**	**14.6347**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	6.41116 / 4.04182	9.9901	8.4100e-003	5.0600e-003	11.7078
Total		**9.9901**	**8.4100e-003**	**5.0600e-003**	**11.7078**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.9692	1.4165	0.0000	59.3826
Unmitigated	23.9692	1.4165	0.0000	59.3826

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	118.08	23.9692	1.4165	0.0000	59.3826
Total		**23.9692**	**1.4165**	**0.0000**	**59.3826**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	118.08	23.9692	1.4165	0.0000	59.3826
Total		**23.9692**	**1.4165**	**0.0000**	**59.3826**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sheldon Grove Project

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.96	Acre	3.96	172,497.60	0
Single Family Housing	123.00	Dwelling Unit	15.24	221,400.00	328

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	369.3538933	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Summer

Project Characteristics - CO2 intensity factor adjusted per SMUD RPS Projections.

Land Use - Acreage updated based on site plan.

Construction Phase - Phase timing based on applicant-provided information.

Grading - Total acres graded based on site plan.

Vehicle Trips - Trip rate adjusted to match Kimley-Horn Memorandum.

Mobile Land Use Mitigation -

Area Mitigation - Applicant has indicated that no hearths would be installed.

Energy Mitigation - Title 24 exceedance and on-site renewable electricity generation represent compliance with 2019 CBSC.

Water Mitigation - Water conservation strategy applied to represent compliance with MWELO and CalGreen.

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	476.00
tblConstructionPhase	NumDays	300.00	476.00
tblConstructionPhase	NumDays	30.00	24.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	10/14/2022	4/20/2023
tblConstructionPhase	PhaseEndDate	8/19/2022	4/6/2023
tblConstructionPhase	PhaseEndDate	6/25/2021	6/7/2021
tblConstructionPhase	PhaseEndDate	9/16/2022	6/9/2021
tblConstructionPhase	PhaseEndDate	5/14/2021	5/4/2021
tblConstructionPhase	PhaseStartDate	9/17/2022	6/24/2021
tblConstructionPhase	PhaseStartDate	6/26/2021	6/10/2021
tblConstructionPhase	PhaseStartDate	5/15/2021	5/5/2021
tblConstructionPhase	PhaseStartDate	8/20/2022	6/8/2021
tblGrading	AcresOfGrading	60.00	19.81
tblLandUse	LotAcreage	39.94	15.24
tblProjectCharacteristics	CO2IntensityFactor	590.31	369.3538933
tblVehicleTrips	ST_TR	9.91	10.23
tblVehicleTrips	SU_TR	8.62	10.23
tblVehicleTrips	WD_TR	9.52	10.23

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.7292	46.4409	31.4768	0.0636	18.2032	2.0454	20.2486	9.9670	1.8818	11.8488	0.0000	6,160.3393	6,160.3393	1.9469	0.0000	6,209.0112
2022	8.4737	21.1976	23.0028	0.0503	1.3117	0.9076	2.2193	0.3535	0.8588	1.2123	0.0000	4,933.0771	4,933.0771	0.7128	0.0000	4,950.8981
2023	8.2685	19.2414	22.4647	0.0497	1.3116	0.7821	2.0937	0.3535	0.7400	1.0935	0.0000	4,875.3847	4,875.3847	0.6988	0.0000	4,892.8546
Maximum	**8.7292**	**46.4409**	**31.4768**	**0.0636**	**18.2032**	**2.0454**	**20.2486**	**9.9670**	**1.8818**	**11.8488**	**0.0000**	**6,160.3393**	**6,160.3393**	**1.9469**	**0.0000**	**6,209.0112**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.7292	46.4409	31.4768	0.0636	18.2032	2.0454	20.2486	9.9670	1.8818	11.8488	0.0000	6,160.3392	6,160.3392	1.9469	0.0000	6,209.0112
2022	8.4737	21.1976	23.0028	0.0503	1.3117	0.9076	2.2193	0.3535	0.8588	1.2123	0.0000	4,933.0771	4,933.0771	0.7128	0.0000	4,950.8981
2023	8.2685	19.2414	22.4647	0.0497	1.3116	0.7821	2.0937	0.3535	0.7400	1.0935	0.0000	4,875.3847	4,875.3847	0.6988	0.0000	4,892.8546
Maximum	**8.7292**	**46.4409**	**31.4768**	**0.0636**	**18.2032**	**2.0454**	**20.2486**	**9.9670**	**1.8818**	**11.8488**	**0.0000**	**6,160.3392**	**6,160.3392**	**1.9469**	**0.0000**	**6,209.0112**

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Energy	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143
Mobile	2.2138	7.0238	23.1216	0.0769	6.8450	0.0553	6.9003	1.8292	0.0515	1.8807		7,790.1516	7,790.1516	0.3231		7,798.2283
Total	**8.1840**	**7.9430**	**33.6068**	**0.0825**	**6.8450**	**0.1764**	**7.0214**	**1.8292**	**0.1726**	**2.0018**	**0.0000**	**8,832.6523**	**8,832.6523**	**0.3602**	**0.0188**	**8,847.2538**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Energy	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
Mobile	2.1377	6.6191	20.8538	0.0683	6.0373	0.0497	6.0869	1.6133	0.0463	1.6596		6,926.3352	6,926.3352	0.2921		6,933.6368
Total	**8.1020**	**7.4879**	**31.3176**	**0.0737**	**6.0373**	**0.1667**	**6.2039**	**1.6133**	**0.1633**	**1.7766**	**0.0000**	**7,904.5968**	**7,904.5968**	**0.3280**	**0.0176**	**7,918.0415**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.00**	**5.73**	**6.81**	**10.73**	**11.80**	**5.51**	**11.64**	**11.80**	**5.41**	**11.25**	**0.00**	**10.51**	**10.51**	**8.95**	**6.28**	**10.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2021	5/4/2021	5	2	
2	Grading	Grading	5/5/2021	6/7/2021	5	24	
3	Building Construction	Building Construction	6/10/2021	4/6/2023	5	476	
4	Paving	Paving	6/8/2021	6/9/2021	5	2	
5	Architectural Coating	Architectural Coating	6/24/2021	4/20/2023	5	476	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19.81

Acres of Paving: 3.96

Residential Indoor: 448,335; Residential Outdoor: 149,445; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,350 (Architectural Coating – sqft)

OffRoad Equipment

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	117.00	41.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372		137.9662	137.9662	3.6700e-003		138.0580
Total	**0.0721**	**0.0369**	**0.5385**	**1.3900e-003**	**0.1369**	**9.2000e-004**	**0.1379**	**0.0363**	**8.5000e-004**	**0.0372**		**137.9662**	**137.9662**	**3.6700e-003**		**138.0580**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372		137.9662	137.9662	3.6700e-003		138.0580
Total	**0.0721**	**0.0369**	**0.5385**	**1.3900e-003**	**0.1369**	**9.2000e-004**	**0.1379**	**0.0363**	**8.5000e-004**	**0.0372**		**137.9662**	**137.9662**	**3.6700e-003**		**138.0580**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8974	0.0000	6.8974	3.4048	0.0000	3.4048			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.8974**	**1.9853**	**8.8828**	**3.4048**	**1.8265**	**5.2313**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413		153.2958	153.2958	4.0800e-003		153.3978
Total	**0.0802**	**0.0410**	**0.5983**	**1.5400e-003**	**0.1521**	**1.0300e-003**	**0.1532**	**0.0404**	**9.5000e-004**	**0.0413**		**153.2958**	**153.2958**	**4.0800e-003**		**153.3978**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8974	0.0000	6.8974	3.4048	0.0000	3.4048			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.8974**	**1.9853**	**8.8828**	**3.4048**	**1.8265**	**5.2313**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413		153.2958	153.2958	4.0800e-003		153.3978
Total	**0.0802**	**0.0410**	**0.5983**	**1.5400e-003**	**0.1521**	**1.0300e-003**	**0.1532**	**0.0404**	**9.5000e-004**	**0.0413**		**153.2958**	**153.2958**	**4.0800e-003**		**153.3978**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1267	4.1181	1.0516	0.0101	0.2467	0.0113	0.2580	0.0710	0.0108	0.0818		1,072.0594	1,072.0594	0.0586		1,073.5242
Worker	0.4689	0.2400	3.5001	9.0100e-003	0.8900	6.0100e-003	0.8960	0.2361	5.5400e-003	0.2416		896.7805	896.7805	0.0239		897.3771
Total	**0.5956**	**4.3581**	**4.5517**	**0.0191**	**1.1367**	**0.0173**	**1.1540**	**0.3071**	**0.0163**	**0.3234**		**1,968.8399**	**1,968.8399**	**0.0825**		**1,970.9013**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1267	4.1181	1.0516	0.0101	0.2467	0.0113	0.2580	0.0710	0.0108	0.0818		1,072.0594	1,072.0594	0.0586		1,073.5242
Worker	0.4689	0.2400	3.5001	9.0100e-003	0.8900	6.0100e-003	0.8960	0.2361	5.5400e-003	0.2416		896.7805	896.7805	0.0239		897.3771
Total	**0.5956**	**4.3581**	**4.5517**	**0.0191**	**1.1367**	**0.0173**	**1.1540**	**0.3071**	**0.0163**	**0.3234**		**1,968.8399**	**1,968.8399**	**0.0825**		**1,970.9013**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1176	3.9151	0.9689	0.0100	0.2467	9.8900e-003	0.2566	0.0710	9.4600e-003	0.0804		1,062.7077	1,062.7077	0.0569		1,064.1303
Worker	0.4377	0.2159	3.2233	8.6800e-003	0.8900	5.8500e-003	0.8959	0.2361	5.3900e-003	0.2415		864.6197	864.6197	0.0215		865.1560
Total	**0.5553**	**4.1310**	**4.1922**	**0.0187**	**1.1367**	**0.0157**	**1.1524**	**0.3071**	**0.0149**	**0.3219**		**1,927.3275**	**1,927.3275**	**0.0784**		**1,929.2863**

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1176	3.9151	0.9689	0.0100	0.2467	9.8900e-003	0.2566	0.0710	9.4600e-003	0.0804		1,062.7077	1,062.7077	0.0569		1,064.1303
Worker	0.4377	0.2159	3.2233	8.6800e-003	0.8900	5.8500e-003	0.8959	0.2361	5.3900e-003	0.2415		864.6197	864.6197	0.0215		865.1560
Total	**0.5553**	**4.1310**	**4.1922**	**0.0187**	**1.1367**	**0.0157**	**1.1524**	**0.3071**	**0.0149**	**0.3219**		**1,927.3275**	**1,927.3275**	**0.0784**		**1,929.2863**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0929	3.3210	0.8595	9.8300e-003	0.2467	4.6700e-003	0.2513	0.0710	4.4600e-003	0.0754		1,043.0352	1,043.0352	0.0511		1,044.3129
Worker	0.4091	0.1943	2.9669	8.3500e-003	0.8900	5.7100e-003	0.8957	0.2361	5.2600e-003	0.2413		832.1136	832.1136	0.0192		832.5943
Total	**0.5020**	**3.5153**	**3.8264**	**0.0182**	**1.1367**	**0.0104**	**1.1471**	**0.3071**	**9.7200e-003**	**0.3168**		**1,875.1488**	**1,875.1488**	**0.0703**		**1,876.9072**

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0929	3.3210	0.8595	9.8300e-003	0.2467	4.6700e-003	0.2513	0.0710	4.4600e-003	0.0754		1,043.0352	1,043.0352	0.0511		1,044.3129
Worker	0.4091	0.1943	2.9669	8.3500e-003	0.8900	5.7100e-003	0.8957	0.2361	5.2600e-003	0.2413		832.1136	832.1136	0.0192		832.5943
Total	**0.5020**	**3.5153**	**3.8264**	**0.0182**	**1.1367**	**0.0104**	**1.1471**	**0.3071**	**9.7200e-003**	**0.3168**		**1,875.1488**	**1,875.1488**	**0.0703**		**1,876.9072**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	5.1876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.4432**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0308	0.4487	1.1500e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		114.9719	114.9719	3.0600e-003		115.0483
Total	**0.0601**	**0.0308**	**0.4487**	**1.1500e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**114.9719**	**114.9719**	**3.0600e-003**		**115.0483**

3.5 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	5.1876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.4432**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0601	0.0308	0.4487	1.1500e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		114.9719	114.9719	3.0600e-003		115.0483
Total	**0.0601**	**0.0308**	**0.4487**	**1.1500e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**114.9719**	**114.9719**	**3.0600e-003**		**115.0483**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**6.1405**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.0472	0.6881	1.7700e-003	0.1750	1.1800e-003	0.1761	0.0464	1.0900e-003	0.0475		176.2902	176.2902	4.6900e-003		176.4075
Total	**0.0922**	**0.0472**	**0.6881**	**1.7700e-003**	**0.1750**	**1.1800e-003**	**0.1761**	**0.0464**	**1.0900e-003**	**0.0475**		**176.2902**	**176.2902**	**4.6900e-003**		**176.4075**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**6.1405**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.0472	0.6881	1.7700e-003	0.1750	1.1800e-003	0.1761	0.0464	1.0900e-003	0.0475		176.2902	176.2902	4.6900e-003		176.4075
Total	**0.0922**	**0.0472**	**0.6881**	**1.7700e-003**	**0.1750**	**1.1800e-003**	**0.1761**	**0.0464**	**1.0900e-003**	**0.0475**		**176.2902**	**176.2902**	**4.6900e-003**		**176.4075**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.1261**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0860	0.0424	0.6337	1.7100e-003	0.1750	1.1500e-003	0.1761	0.0464	1.0600e-003	0.0475		169.9680	169.9680	4.2200e-003		170.0734
Total	**0.0860**	**0.0424**	**0.6337**	**1.7100e-003**	**0.1750**	**1.1500e-003**	**0.1761**	**0.0464**	**1.0600e-003**	**0.0475**		**169.9680**	**169.9680**	**4.2200e-003**		**170.0734**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.1261**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0860	0.0424	0.6337	1.7100e-003	0.1750	1.1500e-003	0.1761	0.0464	1.0600e-003	0.0475		169.9680	169.9680	4.2200e-003		170.0734
Total	**0.0860**	**0.0424**	**0.6337**	**1.7100e-003**	**0.1750**	**1.1500e-003**	**0.1761**	**0.0464**	**1.0600e-003**	**0.0475**		**169.9680**	**169.9680**	**4.2200e-003**		**170.0734**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.1133**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.0382	0.5832	1.6400e-003	0.1750	1.1200e-003	0.1761	0.0464	1.0300e-003	0.0474		163.5779	163.5779	3.7800e-003		163.6724
Total	**0.0804**	**0.0382**	**0.5832**	**1.6400e-003**	**0.1750**	**1.1200e-003**	**0.1761**	**0.0464**	**1.0300e-003**	**0.0474**		**163.5779**	**163.5779**	**3.7800e-003**		**163.6724**

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**6.1133**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.0382	0.5832	1.6400e-003	0.1750	1.1200e-003	0.1761	0.0464	1.0300e-003	0.0474		163.5779	163.5779	3.7800e-003		163.6724
Total	**0.0804**	**0.0382**	**0.5832**	**1.6400e-003**	**0.1750**	**1.1200e-003**	**0.1761**	**0.0464**	**1.0300e-003**	**0.0474**		**163.5779**	**163.5779**	**3.7800e-003**		**163.6724**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1377	6.6191	20.8538	0.0683	6.0373	0.0497	6.0869	1.6133	0.0463	1.6596		6,926.3352	6,926.3352	0.2921		6,933.6368
Unmitigated	2.2138	7.0238	23.1216	0.0769	6.8450	0.0553	6.9003	1.8292	0.0515	1.8807		7,790.1516	7,790.1516	0.3231		7,798.2283

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,258.29	1,258.29	1258.29	3,228,909	2,847,898
Total	1,258.29	1,258.29	1,258.29	3,228,909	2,847,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
Single Family Housing	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
NaturalGas Unmitigated	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8705.94	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143
Total		**0.0939**	**0.8023**	**0.3414**	**5.1200e-003**		**0.0649**	**0.0649**		**0.0649**	**0.0649**		**1,024.2278**	**1,024.2278**	**0.0196**	**0.0188**	**1,030.3143**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8.1599	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
Total		**0.0880**	**0.7520**	**0.3200**	**4.8000e-003**		**0.0608**	**0.0608**		**0.0608**	**0.0608**		**959.9888**	**959.9888**	**0.0184**	**0.0176**	**965.6935**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Unmitigated	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7722					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3050	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562		18.2728	18.2728	0.0175		18.7112
Total	**5.8763**	**0.1169**	**10.1438**	**5.4000e-004**		**0.0562**	**0.0562**		**0.0562**	**0.0562**	**0.0000**	**18.2728**	**18.2728**	**0.0175**	**0.0000**	**18.7112**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7722					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3050	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562		18.2728	18.2728	0.0175		18.7112
Total	**5.8763**	**0.1169**	**10.1438**	**5.4000e-004**		**0.0562**	**0.0562**		**0.0562**	**0.0562**	**0.0000**	**18.2728**	**18.2728**	**0.0175**	**0.0000**	**18.7112**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sheldon Grove Project

Sacramento Metropolitan AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.96	Acre	3.96	172,497.60	0
Single Family Housing	123.00	Dwelling Unit	15.24	221,400.00	328

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	369.3538933	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Winter

Project Characteristics - CO2 intensity factor adjusted per SMUD RPS Projections.

Land Use - Acreage updated based on site plan.

Construction Phase - Phase timing based on applicant-provided information.

Grading - Total acres graded based on site plan.

Vehicle Trips - Trip rate adjusted to match Kimley-Horn Memorandum.

Mobile Land Use Mitigation -

Area Mitigation - Applicant has indicated that no hearths would be installed.

Energy Mitigation - Title 24 exceedance and on-site renewable electricity generation represent compliance with 2019 CBSC.

Water Mitigation - Water conservation strategy applied to represent compliance with MWELO and CalGreen.

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	476.00
tblConstructionPhase	NumDays	300.00	476.00
tblConstructionPhase	NumDays	30.00	24.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	10/14/2022	4/20/2023
tblConstructionPhase	PhaseEndDate	8/19/2022	4/6/2023
tblConstructionPhase	PhaseEndDate	6/25/2021	6/7/2021
tblConstructionPhase	PhaseEndDate	9/16/2022	6/9/2021
tblConstructionPhase	PhaseEndDate	5/14/2021	5/4/2021
tblConstructionPhase	PhaseStartDate	9/17/2022	6/24/2021
tblConstructionPhase	PhaseStartDate	6/26/2021	6/10/2021
tblConstructionPhase	PhaseStartDate	5/15/2021	5/5/2021
tblConstructionPhase	PhaseStartDate	8/20/2022	6/8/2021
tblGrading	AcresOfGrading	60.00	19.81
tblLandUse	LotAcreage	39.94	15.24
tblProjectCharacteristics	CO2IntensityFactor	590.31	369.3538933
tblVehicleTrips	ST_TR	9.91	10.23
tblVehicleTrips	SU_TR	8.62	10.23
tblVehicleTrips	WD_TR	9.52	10.23

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.6924	46.4505	31.3888	0.0634	18.2032	2.0454	20.2486	9.9670	1.8818	11.8488	0.0000	6,141.6763	6,141.6763	1.9464	0.0000	6,190.3360
2022	8.4402	21.3156	22.5775	0.0488	1.3117	0.9083	2.2199	0.3535	0.8594	1.2129	0.0000	4,779.6706	4,779.6706	0.7144	0.0000	4,797.5318
2023	8.2375	19.3291	22.0477	0.0483	1.3116	0.7825	2.0941	0.3535	0.7404	1.0938	0.0000	4,727.3440	4,727.3440	0.7000	0.0000	4,744.8447
Maximum	**8.6924**	**46.4505**	**31.3888**	**0.0634**	**18.2032**	**2.0454**	**20.2486**	**9.9670**	**1.8818**	**11.8488**	**0.0000**	**6,141.6763**	**6,141.6763**	**1.9464**	**0.0000**	**6,190.3360**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.6924	46.4505	31.3888	0.0634	18.2032	2.0454	20.2486	9.9670	1.8818	11.8488	0.0000	6,141.6763	6,141.6763	1.9464	0.0000	6,190.3360
2022	8.4402	21.3156	22.5775	0.0488	1.3117	0.9083	2.2199	0.3535	0.8594	1.2129	0.0000	4,779.6706	4,779.6706	0.7144	0.0000	4,797.5318
2023	8.2375	19.3291	22.0477	0.0483	1.3116	0.7825	2.0941	0.3535	0.7404	1.0938	0.0000	4,727.3440	4,727.3440	0.7000	0.0000	4,744.8447
Maximum	**8.6924**	**46.4505**	**31.3888**	**0.0634**	**18.2032**	**2.0454**	**20.2486**	**9.9670**	**1.8818**	**11.8488**	**0.0000**	**6,141.6763**	**6,141.6763**	**1.9464**	**0.0000**	**6,190.3360**

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Energy	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143
Mobile	1.6396	7.4845	21.1325	0.0694	6.8450	0.0559	6.9008	1.8292	0.0520	1.8812		7,046.8277	7,046.8277	0.3208		7,054.8464
Total	**7.6098**	**8.4037**	**31.6177**	**0.0751**	**6.8450**	**0.1769**	**7.0219**	**1.8292**	**0.1731**	**2.0023**	**0.0000**	**8,089.3284**	**8,089.3284**	**0.3579**	**0.0188**	**8,103.8719**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Energy	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
Mobile	1.5666	7.0223	19.3186	0.0617	6.0373	0.0502	6.0875	1.6133	0.0468	1.6601		6,266.0833	6,266.0833	0.2917		6,273.3751
Total	**7.5310**	**7.8911**	**29.7823**	**0.0671**	**6.0373**	**0.1672**	**6.2045**	**1.6133**	**0.1638**	**1.7771**	**0.0000**	**7,244.3449**	**7,244.3449**	**0.3276**	**0.0176**	**7,257.7797**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.04**	**6.10**	**5.80**	**10.67**	**11.80**	**5.49**	**11.64**	**11.80**	**5.39**	**11.25**	**0.00**	**10.45**	**10.45**	**8.47**	**6.28**	**10.44**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2021	5/4/2021	5	2	
2	Grading	Grading	5/5/2021	6/7/2021	5	24	
3	Building Construction	Building Construction	6/10/2021	4/6/2023	5	476	
4	Paving	Paving	6/8/2021	6/9/2021	5	2	
5	Architectural Coating	Architectural Coating	6/24/2021	4/20/2023	5	476	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 19.81

Acres of Paving: 3.96

Residential Indoor: 448,335; Residential Outdoor: 149,445; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,350 (Architectural Coating – sqft)

OffRoad Equipment

Sheldon Grove Project - Sacramento Metropolitan AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	117.00	41.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0456	0.4593	1.2200e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372		121.1696	121.1696	3.2300e-003		121.2503
Total	**0.0664**	**0.0456**	**0.4593**	**1.2200e-003**	**0.1369**	**9.2000e-004**	**0.1379**	**0.0363**	**8.5000e-004**	**0.0372**		**121.1696**	**121.1696**	**3.2300e-003**		**121.2503**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0456	0.4593	1.2200e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372		121.1696	121.1696	3.2300e-003		121.2503
Total	**0.0664**	**0.0456**	**0.4593**	**1.2200e-003**	**0.1369**	**9.2000e-004**	**0.1379**	**0.0363**	**8.5000e-004**	**0.0372**		**121.1696**	**121.1696**	**3.2300e-003**		**121.2503**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8974	0.0000	6.8974	3.4048	0.0000	3.4048			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.8974**	**1.9853**	**8.8828**	**3.4048**	**1.8265**	**5.2313**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0738	0.0507	0.5103	1.3500e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413		134.6329	134.6329	3.5900e-003		134.7226
Total	**0.0738**	**0.0507**	**0.5103**	**1.3500e-003**	**0.1521**	**1.0300e-003**	**0.1532**	**0.0404**	**9.5000e-004**	**0.0413**		**134.6329**	**134.6329**	**3.5900e-003**		**134.7226**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8974	0.0000	6.8974	3.4048	0.0000	3.4048			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.8974**	**1.9853**	**8.8828**	**3.4048**	**1.8265**	**5.2313**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0738	0.0507	0.5103	1.3500e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413		134.6329	134.6329	3.5900e-003		134.7226
Total	**0.0738**	**0.0507**	**0.5103**	**1.3500e-003**	**0.1521**	**1.0300e-003**	**0.1532**	**0.0404**	**9.5000e-004**	**0.0413**		**134.6329**	**134.6329**	**3.5900e-003**		**134.7226**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1342	4.1858	1.2196	9.8600e-003	0.2467	0.0120	0.2587	0.0710	0.0115	0.0825		1,044.4835	1,044.4835	0.0635		1,046.0698
Worker	0.4318	0.2965	2.9854	7.9100e-003	0.8900	6.0100e-003	0.8960	0.2361	5.5400e-003	0.2416		787.6022	787.6022	0.0210		788.1269
Total	**0.5661**	**4.4823**	**4.2050**	**0.0178**	**1.1367**	**0.0180**	**1.1547**	**0.3071**	**0.0170**	**0.3241**		**1,832.0856**	**1,832.0856**	**0.0844**		**1,834.1967**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1342	4.1858	1.2196	9.8600e-003	0.2467	0.0120	0.2587	0.0710	0.0115	0.0825		1,044.4835	1,044.4835	0.0635		1,046.0698
Worker	0.4318	0.2965	2.9854	7.9100e-003	0.8900	6.0100e-003	0.8960	0.2361	5.5400e-003	0.2416		787.6022	787.6022	0.0210		788.1269
Total	**0.5661**	**4.4823**	**4.2050**	**0.0178**	**1.1367**	**0.0180**	**1.1547**	**0.3071**	**0.0170**	**0.3241**		**1,832.0856**	**1,832.0856**	**0.0844**		**1,834.1967**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1246	3.9725	1.1247	9.7700e-003	0.2467	0.0105	0.2572	0.0710	0.0101	0.0811		1,035.2028	1,035.2028	0.0617		1,036.7441
Worker	0.4038	0.2665	2.7376	7.6200e-003	0.8900	5.8500e-003	0.8959	0.2361	5.3900e-003	0.2415		759.4020	759.4020	0.0188		759.8727
Total	**0.5284**	**4.2391**	**3.8624**	**0.0174**	**1.1367**	**0.0164**	**1.1531**	**0.3071**	**0.0155**	**0.3225**		**1,794.6048**	**1,794.6048**	**0.0805**		**1,796.6167**

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1246	3.9725	1.1247	9.7700e-003	0.2467	0.0105	0.2572	0.0710	0.0101	0.0811		1,035.2028	1,035.2028	0.0617		1,036.7441
Worker	0.4038	0.2665	2.7376	7.6200e-003	0.8900	5.8500e-003	0.8959	0.2361	5.3900e-003	0.2415		759.4020	759.4020	0.0188		759.8727
Total	**0.5284**	**4.2391**	**3.8624**	**0.0174**	**1.1367**	**0.0164**	**1.1531**	**0.3071**	**0.0155**	**0.3225**		**1,794.6048**	**1,794.6048**	**0.0805**		**1,796.6167**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0987	3.3544	0.9912	9.5800e-003	0.2467	5.0700e-003	0.2517	0.0710	4.8500e-003	0.0758		1,016.1101	1,016.1101	0.0552		1,017.4901
Worker	0.3784	0.2398	2.5083	7.3400e-003	0.8900	5.7100e-003	0.8957	0.2361	5.2600e-003	0.2413		730.8956	730.8956	0.0168		731.3164
Total	**0.4771**	**3.5941**	**3.4995**	**0.0169**	**1.1367**	**0.0108**	**1.1475**	**0.3071**	**0.0101**	**0.3172**		**1,747.0057**	**1,747.0057**	**0.0720**		**1,748.8066**

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0987	3.3544	0.9912	9.5800e-003	0.2467	5.0700e-003	0.2517	0.0710	4.8500e-003	0.0758		1,016.1101	1,016.1101	0.0552		1,017.4901
Worker	0.3784	0.2398	2.5083	7.3400e-003	0.8900	5.7100e-003	0.8957	0.2361	5.2600e-003	0.2413		730.8956	730.8956	0.0168		731.3164
Total	**0.4771**	**3.5941**	**3.4995**	**0.0169**	**1.1367**	**0.0108**	**1.1475**	**0.3071**	**0.0101**	**0.3172**		**1,747.0057**	**1,747.0057**	**0.0720**		**1,748.8066**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	5.1876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.4432**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0380	0.3827	1.0100e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		100.9746	100.9746	2.6900e-003		101.0419
Total	**0.0554**	**0.0380**	**0.3827**	**1.0100e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**100.9746**	**100.9746**	**2.6900e-003**		**101.0419**

3.5 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	5.1876					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**6.4432**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0380	0.3827	1.0100e-003	0.1141	7.7000e-004	0.1149	0.0303	7.1000e-004	0.0310		100.9746	100.9746	2.6900e-003		101.0419
Total	**0.0554**	**0.0380**	**0.3827**	**1.0100e-003**	**0.1141**	**7.7000e-004**	**0.1149**	**0.0303**	**7.1000e-004**	**0.0310**		**100.9746**	**100.9746**	**2.6900e-003**		**101.0419**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**6.1405**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0849	0.0583	0.5869	1.5500e-003	0.1750	1.1800e-003	0.1761	0.0464	1.0900e-003	0.0475		154.8278	154.8278	4.1300e-003		154.9309
Total	**0.0849**	**0.0583**	**0.5869**	**1.5500e-003**	**0.1750**	**1.1800e-003**	**0.1761**	**0.0464**	**1.0900e-003**	**0.0475**		**154.8278**	**154.8278**	**4.1300e-003**		**154.9309**

3.6 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**6.1405**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0849	0.0583	0.5869	1.5500e-003	0.1750	1.1800e-003	0.1761	0.0464	1.0900e-003	0.0475		154.8278	154.8278	4.1300e-003		154.9309
Total	**0.0849**	**0.0583**	**0.5869**	**1.5500e-003**	**0.1750**	**1.1800e-003**	**0.1761**	**0.0464**	**1.0900e-003**	**0.0475**		**154.8278**	**154.8278**	**4.1300e-003**		**154.9309**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**6.1261**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0794	0.0524	0.5382	1.5000e-003	0.1750	1.1500e-003	0.1761	0.0464	1.0600e-003	0.0475		149.2842	149.2842	3.7000e-003		149.3767
Total	**0.0794**	**0.0524**	**0.5382**	**1.5000e-003**	**0.1750**	**1.1500e-003**	**0.1761**	**0.0464**	**1.0600e-003**	**0.0475**		**149.2842**	**149.2842**	**3.7000e-003**		**149.3767**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**6.1261**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0794	0.0524	0.5382	1.5000e-003	0.1750	1.1500e-003	0.1761	0.0464	1.0600e-003	0.0475		149.2842	149.2842	3.7000e-003		149.3767
Total	**0.0794**	**0.0524**	**0.5382**	**1.5000e-003**	**0.1750**	**1.1500e-003**	**0.1761**	**0.0464**	**1.0600e-003**	**0.0475**		**149.2842**	**149.2842**	**3.7000e-003**		**149.3767**

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**6.1133**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0744	0.0471	0.4931	1.4400e-003	0.1750	1.1200e-003	0.1761	0.0464	1.0300e-003	0.0474		143.6803	143.6803	3.3100e-003		143.7631
Total	**0.0744**	**0.0471**	**0.4931**	**1.4400e-003**	**0.1750**	**1.1200e-003**	**0.1761**	**0.0464**	**1.0300e-003**	**0.0474**		**143.6803**	**143.6803**	**3.3100e-003**		**143.7631**

3.6 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.9216					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**6.1133**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0744	0.0471	0.4931	1.4400e-003	0.1750	1.1200e-003	0.1761	0.0464	1.0300e-003	0.0474		143.6803	143.6803	3.3100e-003		143.7631
Total	**0.0744**	**0.0471**	**0.4931**	**1.4400e-003**	**0.1750**	**1.1200e-003**	**0.1761**	**0.0464**	**1.0300e-003**	**0.0474**		**143.6803**	**143.6803**	**3.3100e-003**		**143.7631**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5666	7.0223	19.3186	0.0617	6.0373	0.0502	6.0875	1.6133	0.0468	1.6601		6,266.0833	6,266.0833	0.2917		6,273.3751
Unmitigated	1.6396	7.4845	21.1325	0.0694	6.8450	0.0559	6.9008	1.8292	0.0520	1.8812		7,046.8277	7,046.8277	0.3208		7,054.8464

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	1,258.29	1,258.29	1258.29	3,228,909	2,847,898
Total	1,258.29	1,258.29	1,258.29	3,228,909	2,847,898

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
Single Family Housing	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
NaturalGas Unmitigated	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8705.94	0.0939	0.8023	0.3414	5.1200e-003		0.0649	0.0649		0.0649	0.0649		1,024.2278	1,024.2278	0.0196	0.0188	1,030.3143
Total		**0.0939**	**0.8023**	**0.3414**	**5.1200e-003**		**0.0649**	**0.0649**		**0.0649**	**0.0649**		**1,024.2278**	**1,024.2278**	**0.0196**	**0.0188**	**1,030.3143**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8.1599	0.0880	0.7520	0.3200	4.8000e-003		0.0608	0.0608		0.0608	0.0608		959.9888	959.9888	0.0184	0.0176	965.6935
Total		**0.0880**	**0.7520**	**0.3200**	**4.8000e-003**		**0.0608**	**0.0608**		**0.0608**	**0.0608**		**959.9888**	**959.9888**	**0.0184**	**0.0176**	**965.6935**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112
Unmitigated	5.8763	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562	0.0000	18.2728	18.2728	0.0175	0.0000	18.7112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7722					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3050	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562		18.2728	18.2728	0.0175		18.7112
Total	**5.8763**	**0.1169**	**10.1438**	**5.4000e-004**		**0.0562**	**0.0562**		**0.0562**	**0.0562**	**0.0000**	**18.2728**	**18.2728**	**0.0175**	**0.0000**	**18.7112**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7722					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3050	0.1169	10.1438	5.4000e-004		0.0562	0.0562		0.0562	0.0562		18.2728	18.2728	0.0175		18.7112
Total	**5.8763**	**0.1169**	**10.1438**	**5.4000e-004**		**0.0562**	**0.0562**		**0.0562**	**0.0562**	**0.0000**	**18.2728**	**18.2728**	**0.0175**	**0.0000**	**18.7112**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sheldon Grove Project

Sacramento Metropolitan AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	4	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	4.91500E-002	3.39160E-001	4.31810E-001	7.10000E-004	1.98700E-002	1.98700E-002	0.00000E+000	6.07674E+001	6.07674E+001	3.96000E-003	0.00000E+000	6.08666E+001
Cranes	7.95900E-002	9.03020E-001	3.98150E-001	1.20000E-003	3.72300E-002	3.42600E-002	0.00000E+000	1.05569E+002	1.05569E+002	3.41400E-002	0.00000E+000	1.06423E+002
Excavators	5.50000E-003	5.16800E-002	7.85200E-002	1.20000E-004	2.51000E-003	2.31000E-003	0.00000E+000	1.08904E+001	1.08904E+001	3.52000E-003	0.00000E+000	1.09785E+001
Forklifts	8.34300E-002	7.70730E-001	8.25960E-001	1.09000E-003	5.18500E-002	4.77000E-002	0.00000E+000	9.58840E+001	9.58840E+001	3.10100E-002	0.00000E+000	9.66593E+001
Generator Sets	7.97200E-002	7.07070E-001	8.75290E-001	1.57000E-003	3.58500E-002	3.58500E-002	0.00000E+000	1.34519E+002	1.34519E+002	6.47000E-003	0.00000E+000	1.34681E+002
Graders	5.44000E-003	7.10900E-002	2.12100E-002	8.00000E-005	2.25000E-003	2.07000E-003	0.00000E+000	6.98551E+000	6.98551E+000	2.26000E-003	0.00000E+000	7.04199E+000
Pavers	4.90000E-004	5.19000E-003	5.81000E-003	1.00000E-005	2.50000E-004	2.30000E-004	0.00000E+000	8.25650E-001	8.25650E-001	2.70000E-004	0.00000E+000	8.32320E-001
Paving Equipment	3.80000E-004	3.88000E-003	5.08000E-003	1.00000E-005	1.90000E-004	1.80000E-004	0.00000E+000	7.15690E-001	7.15690E-001	2.30000E-004	0.00000E+000	7.21480E-001
Rollers	3.80000E-004	3.85000E-003	3.76000E-003	1.00000E-005	2.40000E-004	2.20000E-004	0.00000E+000	4.61010E-001	4.61010E-001	1.50000E-004	0.00000E+000	4.64740E-001
Rubber Tired Dozers	1.57000E-002	1.64570E-001	6.05700E-002	1.30000E-004	7.99000E-003	7.35000E-003	0.00000E+000	1.12584E+001	1.12584E+001	3.64000E-003	0.00000E+000	1.13495E+001
Scrapers	2.23100E-002	2.56870E-001	1.68110E-001	3.60000E-004	9.99000E-003	9.19000E-003	0.00000E+000	3.19600E+001	3.19600E+001	1.03400E-002	0.00000E+000	3.22184E+001
Tractors/Loaders/ Backhoes	1.11290E-001	1.12974E+000	1.46514E+000	2.03000E-003	6.23100E-002	5.73300E-002	0.00000E+000	1.78343E+002	1.78343E+002	5.76800E-002	0.00000E+000	1.79785E+002
Welders	6.70000E-002	3.50090E-001	4.04680E-001	6.10000E-004	1.56500E-002	1.56500E-002	0.00000E+000	4.47965E+001	4.47965E+001	5.44000E-003	0.00000E+000	4.49325E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	4.91500E-002	3.39160E-001	4.31810E-001	7.10000E-004	1.98700E-002	1.98700E-002	0.00000E+000	6.07674E+001	6.07674E+001	3.96000E-003	0.00000E+000	6.08665E+001
Cranes	7.95900E-002	9.03010E-001	3.98150E-001	1.20000E-003	3.72300E-002	3.42600E-002	0.00000E+000	1.05569E+002	1.05569E+002	3.41400E-002	0.00000E+000	1.06423E+002
Excavators	5.50000E-003	5.16800E-002	7.85200E-002	1.20000E-004	2.51000E-003	2.31000E-003	0.00000E+000	1.08904E+001	1.08904E+001	3.52000E-003	0.00000E+000	1.09784E+001
Forklifts	8.34300E-002	7.70730E-001	8.25960E-001	1.09000E-003	5.18500E-002	4.77000E-002	0.00000E+000	9.58839E+001	9.58839E+001	3.10100E-002	0.00000E+000	9.66592E+001
Generator Sets	7.97200E-002	7.07070E-001	8.75290E-001	1.57000E-003	3.58500E-002	3.58500E-002	0.00000E+000	1.34519E+002	1.34519E+002	6.47000E-003	0.00000E+000	1.34681E+002
Graders	5.44000E-003	7.10900E-002	2.12100E-002	8.00000E-005	2.25000E-003	2.07000E-003	0.00000E+000	6.98550E+000	6.98550E+000	2.26000E-003	0.00000E+000	7.04199E+000
Pavers	4.90000E-004	5.19000E-003	5.81000E-003	1.00000E-005	2.50000E-004	2.30000E-004	0.00000E+000	8.25650E-001	8.25650E-001	2.70000E-004	0.00000E+000	8.32320E-001
Paving Equipment	3.80000E-004	3.88000E-003	5.08000E-003	1.00000E-005	1.90000E-004	1.80000E-004	0.00000E+000	7.15690E-001	7.15690E-001	2.30000E-004	0.00000E+000	7.21470E-001
Rollers	3.80000E-004	3.85000E-003	3.76000E-003	1.00000E-005	2.40000E-004	2.20000E-004	0.00000E+000	4.61010E-001	4.61010E-001	1.50000E-004	0.00000E+000	4.64740E-001
Rubber Tired Dozers	1.57000E-002	1.64570E-001	6.05700E-002	1.30000E-004	7.99000E-003	7.35000E-003	0.00000E+000	1.12584E+001	1.12584E+001	3.64000E-003	0.00000E+000	1.13494E+001
Scrapers	2.23100E-002	2.56870E-001	1.68110E-001	3.60000E-004	9.99000E-003	9.19000E-003	0.00000E+000	3.19600E+001	3.19600E+001	1.03400E-002	0.00000E+000	3.22184E+001
Tractors/Loaders/Backhoes	1.11290E-001	1.12974E+000	1.46514E+000	2.03000E-003	6.23100E-002	5.73300E-002	0.00000E+000	1.78343E+002	1.78343E+002	5.76800E-002	0.00000E+000	1.79785E+002
Welders	6.70000E-002	3.50090E-001	4.04680E-001	6.10000E-004	1.56500E-002	1.56500E-002	0.00000E+000	4.47965E+001	4.47965E+001	5.44000E-003	0.00000E+000	4.49324E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.15193E-006	1.15193E-006	0.00000E+000	0.00000E+000	1.31435E-006
Cranes	0.00000E+000	1.10740E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23142E-006	1.23142E-006	0.00000E+000	0.00000E+000	1.22154E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.83648E-006	1.83648E-006	0.00000E+000	0.00000E+000	9.10875E-007
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25151E-006	1.25151E-006	0.00000E+000	0.00000E+000	1.24147E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18942E-006	1.18942E-006	0.00000E+000	0.00000E+000	1.18799E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.43153E-006	1.43153E-006	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.38604E-005
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	8.88224E-007	8.88224E-007	0.00000E+000	0.00000E+000	8.81100E-007
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25156E-006	1.25156E-006	0.00000E+000	0.00000E+000	1.24153E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17751E-006	1.17751E-006	0.00000E+000	0.00000E+000	1.22368E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.11616E-006	1.11616E-006	0.00000E+000	0.00000E+000	1.11278E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	

No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.26	0.07	0.26	0.07	0.00	0.00
Grading	Fugitive Dust	0.08	0.04	0.08	0.04	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.02	0.01	0.02	0.01	0.00	0.00
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	100.00	100.00	100.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	4.17	6.01	9.10	11.06	10.20	10.20	0.00	11.06	11.06	9.30	0.00	11.06
Natural Gas	6.25	6.27	6.28	5.38	6.25	6.25	0.00	6.27	6.27	6.15	6.43	6.27
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	20.00	20.00	20.06	19.94	20.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.10	0.31		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
Yes	Land Use	Increase Transit Accessibility	0.25	0.00		
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.12			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
Yes	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	7.00	
No	Install High Efficiency Lighting	0.00	
Yes	On-site Renewable	0.00	100.00

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Apply Water Conservation on Strategy	20.00	20.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

APPENDIX B

SMAQMD MINOR PROJECT HEALTH EFFECTS TOOL

Minor Project Health Effects Tool

Latitude	38.439489	**<-- Step 1: Input latitude (Please chose a value between 38.0 and 39.7)**
Longitude	-121.391083	**<-- 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	0.91	0.83	0.0045%	18419
Hospital Admissions, Asthma	0 - 64	0.060	0.055	0.0030%	1846
Hospital Admissions, All Respiratory	65 - 99	0.29	0.25	0.0013%	19644
Cardiovascular					
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.16	0.14	0.00059%	24037
Acute Myocardial Infarction, Nonfatal	18 - 24	0.000075	0.000069	0.0018%	4
Acute Myocardial Infarction, Nonfatal	25 - 44	0.0067	0.0063	0.0020%	308
Acute Myocardial Infarction, Nonfatal	45 - 54	0.017	0.016	0.0022%	741
Acute Myocardial Infarction, Nonfatal	55 - 64	0.028	0.026	0.0021%	1239
Acute Myocardial Infarction, Nonfatal	65 - 99	0.10	0.092	0.0018%	5052
Mortality					
Mortality, All Cause	30 - 99	1.9	1.7	0.0038%	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	0.067	0.053	0.00027%	19644
Emergency Room Visits, Asthma	0 - 17	0.35	0.29	0.0050%	5859
Emergency Room Visits, Asthma	18 - 99	0.54	0.46	0.0036%	12560
Mortality					
Mortality, Non-Accidental	0 - 99	0.041	0.035	0.00011%	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

Sheldon Grove

Sacramento County, California

October 2020
Revised 3 March 2021

MADRONE ECOLOGICAL CONSULTING

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1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) within the Sheldon Grove property (Study Area) conducted by Madrone Ecological Consulting, LLC (Madrone). The approximately 20-acre Study Area is located north of Sheldon Road and east of Power Inn Road in Sections 23 and 24, Township 7 North, Range 5 East, MDB&M (Longitude -121.389962, Latitude 38.439163; NAD83) in Sacramento County, California. The Study Area is portrayed on the USGS "*Florin, California*" 7.5-Minute Series Topographic Quadrangle (USGS 2018) (**Figure 1**).

1.1 Project Description

The Applicant is proposing the construction of an approximately 115-lot residential development with associated infrastructure and other on-site improvements. The entire site will be mass graded in preparation for development **(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 any dredged or fill material into waters of the United States, including wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental

Protection Agency. Waters of the United States include all navigable waters; interstate waters and wetlands; all intrastate waters and wetlands that could affect interstate or foreign commerce; impoundments of the above; tributaries of the above; territorial seas; and wetlands adjacent to the above.

2.1.3 Migratory Bird Treaty Act

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

2.2 State Regulations

2.2.1 California Environmental Quality Act

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

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g. tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

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

2.2.3 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 currently 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.4 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any Applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). Though Section 401 of the Clean Water Act is a federal statute, compliance with this law falls under the direct purview of a California government agency, the RWQCB. This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.5 California Water Code, Porter-Cologne Act

The Porter Cologne Act, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). "Waters of the state" are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

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

The Department of California Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially

modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

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

For the purposes of Section 1602, rivers, streams and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

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

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

2.3 Local Regulations

2.3.1 City of Elk Grove General Plan

The *Conservation and Air Quality Element* (CAQ) of the City of Elk Grove (City) General Plan currently encourages protection to various ecosystems. According to the General Plan, the City of Elk Grove (City) is to "… encourage development clustering where clustering would facilitate on-site protection of woodlands, grasslands, wetlands, stream corridors, scenic areas, or other appropriate natural features …" while following certain conditions. Additionally, "… the City shall seek to ensure that no net loss of wetland areas occurs …" (City of Elk Grove 2016). The City's entire General Plan can currently be accessed at the following website: file:///T:/Agency%20Publications/City%20of%20Elk%20Grove/COEG_GP_Full_2015.pdf.

2.3.2 City of Elk Grove Tree Preservation and Protection (Municipal Code Chapter 19.12)

The City has adopted regulations for the preservation and protection of certain trees within the City limits. These regulations were first adopted by Sacramento County prior to incorporation of the City in 1981. The City adopted a comprehensive update to these regulations in 2011. The City's adopted regulations apply to four types of trees as follows:

- "*Landmark trees*," which are trees specifically identified for protection by the Elk Grove City Council;
- "*Trees of local importance*," which are trees of specific varieties greater than six inches in diameter;
- "*Secured trees*," which are trees that were 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.

A tree permit must be secured from the City prior to removal (or other work) on any of the above four types of trees. The City's complete tree protection ordinances can be found at the following website: https://www.codepublishing.com/CA/ElkGrove/html/ElkGrove19/ElkGrove1912.html#19.12.

2.3.3 City of Elk Grove Swainson's Hawk Code (Municipal Code Chapter 16.130)

In 2003, the City established and adopted Chapter 16.130 (Swainson's Hawk Impact Mitigation Fees) of the Elk Grove Municipal Code, which establishes mitigation policies and options 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. Chapter 16.130 of the 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. Notably, Section 16.130.030 restricts the applicability of these mitigation requirements to Projects which are requesting a change to, or rezone from, agriculturally-zoned land. The ordinance provides:

A. This chapter shall apply to any Project that has been determined through the CEQA process to result in a potential significant impact or potential significant cumulative impact on Swainson's hawk foraging habitat for which mitigation measures have been identified as necessary to reduce that impact to a less than significant level, and for which any of the following requests are being sought:

1. Any request for a change in land use designation from an agricultural designation to an urban designation; or
2. Any request to subdivide five (5) acres or more of contiguous land zoned AR-1 or AR-2; or
3. Any request for a land use entitlement for a nonagricultural use of land zoned with an agricultural designation; or
4. Any request for a land use entitlement for a nonagricultural use of land five (5) acres or more in size zoned AR-1 or AR-2; or
5. Any public improvement Project proposed by any department or agency of the City of Elk Grove on land with an agricultural designation.

B. This chapter shall apply to any Project approved prior to the effective date of the ordinance codified in this chapter which was conditioned to require mitigation for impacts to Swainson's hawk foraging habitat and which mitigation has not been completed through the payment of a fee or other mechanism included in such mitigation measure. [Ord. 7-2009 §3, eff. 5-1-2009; Ord. 22-2004 §5, eff. 7-21-2004; Ord. 35-2003 §3, eff. 10-17-2003; Ord. 2000-14A §1, eff. 10-25-2000; Ord. 2000-1 §1, eff. 7-1-2000.]
Additional information regarding the City's Swainson's Hawk Program is provided at the following website:
http://www.elkgrovecity.org/city_hall/departments_divisions/planning/resources_and_policies/swainsons_hawk_program.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases **(Table 1**):

- California Natural Diversity Database (CNDDB) (CNDDB 2020) query of the Study Area and all areas within five miles of the Study Area (**Figures 2** and **3**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2020) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2020) query of the "*Florin, California*" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**);
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2020): and

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 2017); 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 senior biologist Matt Hirkala conducted field surveys of the Study Area on 15 September 2020 to assess the suitability of habitats on-site to support special-status species. Mr. Hirkala also performed a windshield survey of the surrounding areas on 24 August 2020. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and Evens 2009), and plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2020). A list of all wildlife and plant species observed during field surveys is included as **Attachments D** and E, respectively. **Attachments F** contains digital photos of representative landscapes within the Study Area.

4.0 EXISTING CONDITIONS

The south and west edges of the parcel are bordered by Sheldon Road and Power Inn Road, respectively, and most of the immediately surrounding lands are occupied by low density residential developments. An assisted care facility is located south of Sheldon Road, and the Charles B. Angell Fire Station is situated directly to the east. The majority of the north and east boundaries of the parcel are bordered by brick privacy walls.

Based on a review of historic aerial photography and USGS topographic maps, the site was flood irrigated in the 1960s and utilized for agricultural purposes. Additional major disturbances occurred in 2002 when the site was graded during the construction of the surrounding residential developments and used as a construction equipment staging area. The current Study Area was part of the Arcadian Village #2 Project, which was approved by the County of Sacramento in 1999.

According to 1980 USGS topographic maps, the site elevation was previously between 30 and 35 feet above sea level (HistoricAerials 2020). According to LiDAR elevation data provided to Sacramento County by Merrick & Company in 2004, the Study Area is currently situated on leveled terrain at elevations ranging from approximately 38 to 40 feet, suggesting that fill may have been placed within the Study Area sometime during development of the area.

The Study Area currently lacks any habitable structures, and the parcel elevation is above that of Sheldon and Power Inn Roads as it was used to stockpile compacted fill from adjacent development; no roadside drainage ditches were constructed along these roads. At the time of the field survey the majority of the site had been disked; however, much of the vegetation was sidecast and readily identifiable.

4.1 Terrestrial Vegetation Communities

4.1.1 Ruderal Annual Grasslands

Ruderal annual grasslands occupy the entire the Study Area (**Figure 4**). This terrestrial vegetation community is predominantly comprised of wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and perennial ryegrass (*Lolium perenne*) with scattered bindweed (*Convolvulus arvensis*) and curly dock (*Rumex crispus*). Substantial amounts of trash and yard waste are located along the northern boundary of the site and appear to have been deposited by occupants of the residential development to the north.

Most of the site's few trees are located near the northwest and east edges of the site and consist of small (less than 15' tall) black locust (*Robinia pseudoacacia*). A small thicket of Himalayan blackberry (*Rubus armeniacus*) and a small Siberian elm (*Ulmus pumila*) are growing near the fire station on the east edge of the Study Area.

4.2 Aquatic Resources

The Study Area was also delineated for the presence of aquatic resources, including potential waters of the U.S., during the above-described field survey. Madrone's 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 2016a). USACE regulations (33 CFR 328) were used to determine the presence of aquatic resources, including waters of the United States other than wetlands.

No aquatic resources, including waters of the U.S. were delineated within the Study Area. It should be noted that the Study Area was disked prior to Madrone's site visit, but in addition to the field investigation, Madrone also conducted a thorough review of aerial photography of the parcel from 2002 to 2019, which did not reveal any definitive indictaions ponding or saturation.

4.3 Soils

The Natural Resources Conservation Service (NRCS) has mapped the three soil units listed below within the Study Area (**Figure 5**) (NRCS 2020):

- Madera-Galt complex, 0 to 2% slopes (176) – the Galt component and the Clearlake inclusion are classified as hydric.
- San Joaquin silt loam, leveled, 0 to 1% slopes (213) – the Galt inclusion within this map unit is classified as hydric.
- San Joaquin-Galt complex, leveled, 0 to 1% slopes (217) – the Galt component and the Clearlake inclusion are classified as hydric.

None of the above map units are known to contain gabbro, serpentine, or alkaline soils, which are known to harbor rare plants (NRCS 2020).

4.4 Special Lands

Based on our queries, the Study Area is not located within any of the following special designated lands:

- The Primary or Secondary Zone of the Legal Delta;
- Critical Habitats as designated by the USFWS;
- USFWS Vernal Pool Core Recovery Areas.

5.0 RESULTS

Table 1 provides a list of special-status species generated by the above-described database queries that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. Several animal species not earmarked by the database queries as occurring within the search area were added to this analysis due to the Study Area's location in their known range (western spadefoot toad and loggerhead shrike) or because of their high potential for future listing under the ESA (midvalley fairy shrimp and California linderiella).

The following set of criteria was used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat.
- Absent/No Habitat Present: The site does not contain suitable habitat for the species, the species was not observed during protocol-level floristic surveys conducted on-site, the species was not observed during protocol-level wet-season and dry-season large listed vernal pool branchiopod surveys conducted on-site, or the site is outside the known range of the species.

Figures 2 and **3** are exhibits displaying CNDDB occurrences of plants and wildlife, respectively, as well as critical habitats, within five miles of the Study Area. Below is a discussion of all special-status animal species with potential to occur on the site.

5.1 Birds

5.1.1 Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*), which is also known as the blue darter or chicken hawk, is a CDFW Watch List species. This raptor is an ambush predator that prefers to forage in or near wooded locations for birds, domestic poultry, and small mammals. Cooper's hawks subdue prey by continuously squeezing with talon-equipped feet, and it has been observed on occasion drowning captured prey in water. This species nests in trees located in wooded areas typically 10 to 60 feet above ground level.

There are two CNDDB occurrences of this species within five miles of the Study Area. The closest is located approximately 2.8 miles to the west on the west side of Franklin Boulevard north of Sims Road (CNDDB occurrence #99) (CDFW 2020). Though the site lacks suitable nesting habitat as the trees within the Study Area are too small, the ruderal annual grasslands provide marginally suitable foraging habitat for this species. There is a low potential for occurrence of this species within the Study Area.

Table 1. Special-Status Species with Potential to Occur within the Sheldon Grove Study Area

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Plants				
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--	CRPR 1B.1	Vernally mesic meadows and seeps with alkali soils or sub-alkali flats.	**No Habitat Present.** Alkali soils are not present within the Study Area.
Brasenia schreberi Watershield	--	CRPR 2B.3	Fresh water marshes and swamps at elevations ranging from 95 to 7,220 feet.	**No Habitat Present.** The site lacks freshwater marshes and swamps. Parcel is below known range of species.
Carex comosa Bristly sedge	--	CNPR 2B.1	Fresh water marshes along lake edges and riparian areas.	**No Habitat Present.** The site lacks freshwater marshes.
Centromadia parryi ssp. *parryi* Pappose tarplant	--	CRPR 1B.2	Favors coastal prairie, meadows, seeps, coastal salt marshes, and valley/foothill grasslands with alkaline or saline soils.	**No Habitat Present.** Alkali or saline soils are not present within the Study Area.
Cicuta maculata var. *bolanderi* Bolander's water-hemlock	--	CRPR 2B.1	Brackish or freshwater marshes and swamps.	**No Habitat Present.** No marshes or swamps are present.
Cicuta obtusiflora var. glandulosa Peruvian dodder	--	CRPR 2B.2	Fresh water marshes and swamps at elevations ranging from 45 to 920 feet.	**No Habitat Present.** No marshes or swamps are present. Parcel is below known range of species.
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Vernal pools/seasonal wetlands.	**No Habitat Present.** No vernal pools or seasonal wetlands are present.
Gratiola heterosepala Bogg's Lake hedge-hyssop	--	CE, CRPR 1B.2	Vernal pools and margins of lakes/ponds.	**No Habitat Present.** No vernal pools or seasonal wetlands are present.
Hibiscus lasiocarpos var. *occidentalis* Woolly rose-mallow	--	CRPR 1B.2	Freshwater wetlands/marshes including edges.	**No Habitat Present.** The site lacks freshwater marshes.
Juglans hindsii *Northern California black walnut*	--	CRPR 1B.1	Only two of three known native stands are still in existence. This species prefers riparian scrub and riparian woodland habitats.	**Absent.** This species is not present.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	CRPR 1B.2	Edges of vernal pools and other seasonally ponded features at elevations between 100 and 750 feet.	**No Habitat Present.** The Study Area elevation is below known range of this species. Parcel lacks seasonally ponded features.
Lathyrus jepsonii var. *jepsonii* Delta tule pea	--	CRPR 1B.2	Freshwater or brackish marshes and swamps at or below 15 feet.	**No Habitat Present.** No marshes or swamps are present and the Study Area is above the elevation range of this species.
Legenere limosa Legenere	--	CRPR 1B.1	Vernal pools/seasonal wetlands.	**No Habitat Present.** No vernal pools or seasonal wetlands are present.
Lepidium latipes var. *heckardii* Heckard's pepper-grass	--	CRPR 1B.2	Valley and foothill grasslands with alkaline soils.	**No Habitat Present.** The site lacks grasslands habitats with alkaline soils.
Lilaeopsis masonii Mason's lilaeopsis	--	CR, CRPR 1B.1	Brackish or freshwater swamps, intertidal marshes, and riparian scrub at or below 35 feet.	**No Habitat Present.** The site lacks the necessary water features or riparian scrub to support this species.
Orcuttia tenuis Slender Orcutt grass	FT	CE, CRPR 1B.1	Vernal pools and other seasonally ponded features at elevations ranging from approximately 115 to 5,800 feet.	**No Habitat Present.** The Study Area, which lacks seasonally ponded features, is below the known elevation of this species.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Orcuttia viscida Sacramento Orcutt grass	FE	CE, CRPR 1B.1	Vernal pools and other seasonally ponded features at elevations ranging from approximately 95 to 330 feet.	**No Habitat Present.** The Study Area, which lacks seasonally ponded features, is below the known elevation of this species.
Sagittaria sanfordii Sanford's arrowhead	--	CRPR 1B.2	Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches.	**No Habitat Present.** The site lacks drainages, canals, or irrigation ditches.
Scutellaria galericulata *Marsh skullcap*	--	CRPR 2B.2	Fresh water marshes, wet meadows and seeps.	**No Habitat Present.** The site lacks marshes, wet meadows, or seeps.
Scutellaria lateriflora *Side-flowering skullcap*	--	CRPR 2B.2	Fresh water marshes, wet meadows and seeps.	**No Habitat Present.** The site lacks marshes, wet meadows, or seeps.
Symphyotrichum lentum Suisun Marsh aster	--	CRPR 1B.2	Fresh and salt water marshes situated at sea level to 10 feet in elevation, often associated with blackberries, cattails, and bulrush.	**No Habitat Present.** The site lacks marshes or swamps and is above the elevational range of this species.
Trifolium hydrophilum Saline clover	--	CRPR 1B.2	Grows in salt marshes, swamps, and vernal pools with alkaline soils.	**No Habitat Present.** The site lacks salt marshes, swamps, and vernal pools with alkaline soils.
Invertebrates				
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Vernal pools or other seasonal wetlands.	**No Habitat Present.** The site lacks vernal pools or other seasonal wetlands.
Branchinecta mesovallensis Midvalley fairy shrimp	--	--	Vernal pools or other seasonal wetlands.	**No Habitat Present.** The site lacks vernal pools or other seasonal wetlands.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry plant as primary host species.	**No Habitat Present.** The site lacks the required elderberry shrubs.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	Vernal pools or other seasonal wetlands.	**No Habitat Present.** The site lacks vernal pools or other seasonal wetlands.
Linderiella occidentalis California linderiella	--	--	Vernal pools or other seasonal wetlands.	**No Habitat Present.** The site lacks vernal pools or other seasonal wetlands.
Fish				
Hypomesus transpacificus Delta smelt	FT	CE	Adults are found in the brackish open surface waters of the Delta and Suisun Bay. Though spawning has never been observed, it is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone.	**No Habitat Present.** No tidally influenced sloughs or drainages are present within the Study Area.
Amphibians				
Ambystoma californiense California tiger salamander	FT	CT	Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**No Habitat Present.** Study Area is considered to be outside of the current range of this species. The site is also completely surrounded by development and lacks vernal pools or other persistently ponded seasonal aquatic features.
Spea hammondii Western spadefoot	--	CSC	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	**No Habitat Present.** The Study Area completely surrounded by development and lacks vernal pools or other persistently ponded seasonal aquatic features.
Rana draytonii California red-legged frog	FT	CSC	Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages	**No Habitat Present.** The Study Area is considered to be outside of the current range of this species. The site is also completely surrounded by development and lacks permanent to semi-permanent aquatic features.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Reptiles				
Actinemys marmorata Western pond turtle	--	CSC	Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**No Habitat Present.** The Study Area is completely surrounded by development and lacks permanent to semi-permanent aquatic features.
Thamnophis gigas Giant garter snake	FT	CT	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	**No Habitat Present.** The Study Area is completely surrounded by development and lacks aquatic habitats with slow moving water and heavy emergent vegetation.
Birds				
Accipiter cooperi Cooper's hawk	--	CSA	Inhabits forested habitats, forest edge, and riparian habitat, may forage in adjacent grassland and fields.	**Low.** Though the site lacks suitable nesting habitat, the ruderal grassland provides marginally suitable foraging habitat.
Agelaius tricolor Tricolored blackbird	--	CCE, CSC	Historically, most colonies were established in freshwater marshes dominated by cattails (*Typha* spp.) and bulrushes (*Scirpus* or *Schoenoplectus* spp.). More recently, they have also nested in introduced mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Circium* spp.), and mallows (*Malva* spp.) in fields.	**Low.** The thickets of Himalayan blackberry on-site are too sparse to provide suitable nesting habitat; however, the ruderal grassland provides marginally suitable foraging habitat.
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 site, which is completely surrounded by development, appears too small and disturbed to represent foraging habitat. The site has no cliffs and the trees are too small to accommodate nesting.
Athene cunicularia Burrowing owl	--	CSC	Nests in abandoned ground squirrel burrows associated with open grassland habitats.	**Moderate.** Though no burrows were observed, the field survey was not comprehensive, and nesting habitat may be present. The ruderal grassland represents limited suitable foraging habitat.
Buteo regalis Ferruginous hawk	--	CSA	A wintering species in California. Forages in open areas such as grasslands and fields for ground squirrels as well as other small mammals, birds, lizards, snakes, and rabbits.	**Low.** The ruderal grassland provides marginally suitable foraging habitat for migrants.
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.** Though the trees within the Study Area are too small and sparse to provide nesting habitat, the ruderal grassland provides marginally suitable foraging habitat.
Circus cyaneus Northern harrier	--	CSC	Nests in emergent wetland/marsh, open grasslands, or savannah habitats. Forages in open areas such as marshes, agricultural fields, and grasslands.	**Low.** The Study Area, which is likely disked annually for fire and weed control, does not represent suitable nesting habitat; however, the ruderal grassland provides marginally suitable foraging habitat.
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**Low.** Though the trees within the Study Area are too small and sparse to provide nesting habitat, the ruderal grassland provides marginally suitable foraging habitat.
Falco columbarius Merlin	--	CSA	It is not known to nest in California, but it is a winter transient throughout most of the state with wintering populations in the Central Valley.	**Low.** The ruderal grassland provides marginally suitable foraging habitat for wintering migrants.
Lanius ludovicianus Loggerhead shrike	--	CSC	Occurs in open areas with sparse trees, shrubs, or low trees and short vegetation. Often observed in old orchards, riparian areas, savannas, golf courses, and cemeteries. Nests in thorny vegetation typically 2.5 to 4 feet above the ground.	**Moderate.** The trees and ruderal grasslands provide very limited suitable nesting and foraging habitats, respectively.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Melospiza melodia mailliardi Song sparrow "Modesto" population	--	CSC	Nest in emergent freshwater marshes dominated by tules and cattails as well as riparian willow thickets. This species also nests in riparian forests of valley oak with a blackberry understory, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites (Shuford and Gardali 2008).	**No Habitat Present.** The site lacks freshwater marshes and willow thickets or other vegetated riparian corridors.
Mammals				
Antrozous pallidus Pallid bat	--	CSC, WBWG H	Roosts in crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating bark, deciduous trees in riparian areas, and fruit trees in orchards), bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2020).	**No Habitat Present.** The few trees located within the parcel are very small and lack cavities or exfoliating bark, and no human-made structures are present.
Corynorhinus townsendii Townsend's big-eared bat	--	CSC, WBWG H	Roosts in caves and cave analogues, such as abandoned mines, buildings, bridges, rock crevices and large basal hollows of coast redwoods and giant sequoias. Extremely sensitive to human disturbance. (WBWG 2020).	**No Habitat Present.** No caves or cave analogues are present on-site.
Lasionycteris noctivagans Silver-haired bat	--	WBWG M	Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features.	**No Habitat Present.** The few trees located within the parcel are very small and lack cavities or exfoliating bark.
Lasiurus blossevillii Western red bat	--	CSC, WBWG H	Roosts primarily in the foliage of trees or shrubs (WBWG 2020). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2020).	**No Habitat Present.** The few trees located within the parcel are very small and sparse.
Lasiurus cinereus Hoary bat	--	WBWG M	Roosts primarily in foliage of both coniferous and deciduous trees at the edges of clearings (WBWG 2020).	**No Habitat Present.** The few trees located within the parcel are very small and sparse.

Status Codes:

CCT - CDFW Candidate for Listing (Threatened)
CCE - CDFW Candidate for Listing (Endangered)
CE - CDFW Endangered
CFP - CDFW Fully Protected
CR - CDFW Rare
CRPR - California Rare Plant Rank
CSA - CDFW Special Animal
CSC - CDFW Species of Special Concern
CT - CDFW Threatened
FC - Candidate for Federal Listing
FD - Federally Delisted
FE - Federally Endangered
FPT - Proposed for Federal Listing (Threatened)
FPE - Proposed for Federal Listing (Endangered)
FT - Federally Threatened
SSHCP Covered Species - South Sacramento Habitat Conservation Plan
WBWG M - Western Bat Working Group Medium Threat Rank
WBWG H - Western Bat Working Group High Threat Rank

5.1.2 Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) populations, which are currently in decline throughout the state, was listed as threatened under CESA by the California Fish and Game Commission on 19 April 2018. Historically, colonies were established in freshwater marshes dominated by cattails (*Typha* spp.) and bulrushes (*Scirpus* or *Schoenoplectus* spp.). More recently, they have utilized non-native mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Circium* spp.), and mallows (*Malva* spp.) as nesting substrate. Since the 1980's, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder. This current trend of nesting in active agricultural fields has further imperiled the species as nestlings typically have not fledged by the time the triticale is harvested.

The CNDDB records 15 occurrences of tricolored blackbird within the five mile search radius including one potentially within the Study Area. CNDDB Occurrence #19 is centered just south of the Study Area and was first observed in 1982, when a colony of about 130 nesting pairs were observed. This occurrence is classified as "possibly extirpated" due to intense residential development in the area (CDFW 2020).

A Himalayan blackberry thicket along the east edge of the Study Area perimeter is too sparse to represent suitable nesting habitat for tricolored blackbird; however, the ruderal annual grasslands provide marginally suitable foraging habitat. There is a low potential for occurrence of this species within the Study Area.

5.1.3 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either CESA or FESA; however, it is designated as a species special concern by the CDFW. This small raptor typically inhabits dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species usually uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use burrow surrogates such as culverts; cement, asphalt, or wood debris piles, or openings beneath cement or asphalt pavement. The breeding season extends from February 1 through August 31 (CBOC 1993, CDFG 2012).

The nearest CNDDB occurrence is located approximately one mile south of the Study Area in the vicinity of the Laguna Boulevard Highway 99 south on-ramp (CNDDB Occurrence #1258) (CNDDB 2020). Though no ground squirrel burrows, or other suitable nesting sites were observed, a comprehensive surveyed for this type of habitat was not performed. The ruderal annual grasslands provide very limited suitable foraging habitat for this species; there is a moderate potential for occurrence of this species within the Study Area.

5.1.4 Ferruginous Hawk

The ferruginous hawk (*Buteo regalis*) is classified as a CDFW Watch List species. This species winters in California from August or September to February or early March during which it forages in grasslands, agricultural lands, or other open areas. Favored prey primarily includes rabbits, ground squirrels or other small mammals, though they have been known to feed on birds, reptiles, and large insects. During the

winter, this large powerful buteo is relatively common throughout most of the state with the exception of the northwestern and northeastern corners of California. The breeding range in the U.S. extends from east of the Rocky Mountains to the Great Plains.

One occurrence of wintering/foraging ferruginous hawks is recorded in the CNDDB within five miles of the Study Area. This occurrence is located approximately 3.9 miles to the west where one wintering adult was observed in 2003 near the Sacramento Regional Wastewater Plant (CNDDB Occurrence #74) (CNDDB 2020). Though this species does not nest in the Central Valley, there is a low likelihood of seasonal occurrences within the ruderal annual grassland, which may provide limited suitable foraging habitat.

5.1.5 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. 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 CNDDB records 36 occurrences of nesting Swainson's hawks within five miles of the Study Area, though none have occurred within the last five years. One occurrence from 2001 (CNDDB Occurrence #933) is potentially located within or in close proximity to the Study Area on the north side of Sheldon Road; however, based on a review of historic aerial photography, any potential nest trees within this area were removed prior to 2003 during the construction of the surrounding residential developments. No trees suitable to support nesting are present within the Study Area.

Figure 6 displays CNDDB occurrences of Swainson's hawk nests within 0.5 mile of the Study Area, all of which are relatively old (1989-2002) and most were recorded prior to the development of the area. Details on the current status of each historic occurrence are included in **Figure 6**, but all three of these nest trees are either gone, or are remaining on fully developed lots and have not had recently recorded use by Swainson's hawk.

Figure 7 portrays CNDDB occurrences of "active" Swainson's hawk nests – or nests known to be active within the last 5 calendar years – located within 10 miles of the Project site. All are located along the Sacramento River approximately 10 miles west of the Study Area. There are no active nests recorded in the CNDDB within the vicinity of the site, and the nearest active nests located approximately 10 miles away (to the northwest near the riparian zone of the Sacramento River) are much further than the 2-mile foraging range usually assumed around active nests.

The parcel lacks trees large enough to present suitable nesting habitat. The Study Area does contain ruderal annual grassland, though the natural grade has been raised as fill has been imported to the site and compacted during rough grading associated with previous development of the site and surrounding area. The property's small size, isolated nature, intensive and ongoing management practices, and apparent lack

of rodent activity leads us to believe that it represents low-quality foraging habitat for Swainson's hawk. There are much better and larger foraging opportunities available in other portions of the valley, including extensive agricultural and other open space area suitable for foraging much closer to known active nests, which as noted above are approximately 10 miles from the Project site. While it is possible a hawk passing through the area could attempt to forage at the site, we do not believe development of the parcel would represent a significant impact (as defined by CEQA) to hawks in the region. Following is additional information to support this conclusion:

- Regarding nesting habitat, none of the trees on-site or on the immediately adjacent parcels are large enough to support Swainson's hawk nests (see **Figure 6**;
- The site has been built up with imported soil and subsequently compacted. It supports ruderal grasslands that could potentially provide habitat for foraging Swainson's hawks; however, the site has been heavily graded in the past and is annually disked for fire and weed control thereby reducing the density of prey species such as rodents, rabbits, and reptiles;
- The site is relatively small and isolated (surrounded by development on all sides), and as expected, very little rodent activity, including burrows, was noted at the time of our site visit. Surrounding development limits availability of prey in the area, and the existing roadways likely limit the ability of prey that may be in the area to migrate into the site.
- The close proximity of the site to residential developments has likely further reduced the density of Swainson's hawk prey species due to predation by domestic cats and dogs;
- Sidewalks border the south and west sides of the site and accommodate foot and bicycle traffic which further reduces the quality of foraging habitat, including the ability of prey to access the site;
- The site is located adjacent to Sheldon Road which is a well-traveled connector street – the high volume of vehicular traffic likely presents an inhibiting disturbance to potentially-forging Swainson's hawks.
- Active nests (recorded in the last 5 years) in the region are located approximately 10 miles west/northwest of the Study Area along the riparian zone of the Sacramento River. It is unlikely hawks nesting along the river would travel such a distance to forage, especially at such a small, active site. There are extensive suitable foraging opportunities available immediately west and south of these nests, including large, naturalized areas and agricultural operations that Swainson's hawks prefer for foraging over small, distant, isolated patches of grassland.

Additionally, in January of 2009, Estep Environmental Consulting prepared for the City of Elk Grove a document titled, *The Distribution, Abundance, and Habitat Associations of the Swainson's Hawk (Buteo swainsoni) in the City of Elk Grove, California*, (Swainson's hawk report) (and available at: https://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/Swainsons-Hawk-Study_January-2009.pdf).

The purpose of this report, in part, was described in the executive summary by the following:

> "As the City continues to implement its General Plan, information on Swainson's hawk distribution and abundance within the city limit boundary would be useful in assessing the effects on continued

urbanization of remaining open space lands and exploring additional conservation opportunities. Thus, to provide additional information on Swainson's hawk nesting distribution and abundance within the city limit boundary, a survey was conducted in 2008, the results of which are presented in this report."

According to the Swainson's hawk report, the Sheldon Grove Study Area is located in an area classified as "High Density Urban," which is described as follows:

> "High Density Urban. This type consists of dense small-lot residential or commercial development. Open space areas consist mainly of community parks and golf courses. While it is possible that Swainson's hawks could nest in these areas if suitable trees existed and if they were within 1 to 2 miles of suitable foraging habitat (England et al. 1995), there are no foraging opportunities within this type. Approximately 60 percent of the study area is currently defined as high density urban (Table 6-3) and additional conversion to high density urban is planned within the study area."

Based on the above-listed information, it is Madrone's opinion that the Study Area provides low-quality, marginal foraging habitat for Swainson's hawk, and that while it is possible the Study Area could be used for foraging by hawks in or migrating through the area, it is an isolated patch of ruderal vegetation surrounded by development, and there is a low likelihood of use.

5.1.6 Northern Harrier

The northern harrier *(Circus cyaneus)* is not listed pursuant to either CESA or FESA; however, it is considered a species of special concern by the CDFW. This raptor is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California. The northern harrier is a ground nesting species and typically nests in emergent wetland/marsh, open grasslands, or savannah habitats. Foraging occurs within a variety of open habitats such as marshes, agricultural lands, and grasslands (Shuford and Gardali 2008).

There are no recorded CNDDB occurrences of this species within five miles of the Study Area (CDFW 2020); however, the IPaC considers the site as potential habitat for the northern harrier. The ruderal annual grasslands provide marginally suitable foraging habitat; however, it likely does not provide suitable nesting habitat as the site is disked annually for fire and weed control. There is a low potential for occurrence of this species within the Study Area.

5.1.7 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. 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 nearest CNDDB occurrence of white-tailed kite (CNDDB Occurrence #28) is located approximately 3.5 miles northeast of the Study Area south of McCoy Avenue (CDFW 2020). The ruderal annual grasslands provide marginally suitable foraging habitat, but the trees on-site appear to be too small to provide nesting habitat. There is a low potential for occurrence of this species within the Study Area.

5.1.8 Merlin

The merlin (*Falco columbarius*) is considered a special animal by CDFW. It has never been observed nesting in California, but it is a transient throughout most of the state, and wintering populations are known to occur in the Central Valley and along the coast. Merlins prefer to forage open areas with small clumps or groves of trees for roosting.

The CNDDB lists four occurrences of this species within five mile of the Study Area; the closest is approximately 3 miles to the west in the Sacramento Regional County Sanitation District's Bufferlands (CNDDB occurrence #21) (CNDDB 2020). The ruderal annual grasslands provide marginally suitable foraging habitat, but the trees on-site appear to be too small to provide nesting habitat. There is a low potential for occurrence of this species within the Study Area.

5.1.9 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed pursuant to either CESA or FESA; however, it is a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). The nesting season ranges from March through June.

This species has not been documented by the CNDDB within five miles of the Study Area (CNDDB 2020); however, the parcel is located within the historic range of loggerhead shrike. The ruderal annual grasslands provide very limited suitable foraging habitat, and the trees on-site provide marginal nesting habitat. There is a moderate potential for occurrence of this species within the Study Area.

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential Project impacts to the sensitive biological resources discussed above.

6.1 Vegetation Communities

The only vegetation community identified within the Study Area is ruderal annual grasslands. Since Project implementation will require mass grading of the entire Study Area, all 20 acres of ruderal annual grasslands will be impacted (**Figure 4**).

6.2 Aquatic Resources

Since no aquatic resources were identified within the Study Area, Project implementation will not result in direct impacts to any aquatic features.

6.3 Water Quality

Mass grading associated with Project construction will result in the disturbance of the existing vegetation cover and potentially could result in the deposition of sediment- or chemical-laden run-off in off-site down-slope aquatic features.

Similarly, completion of the Project will result in the creation of new impervious surfaces and thereby potentially increase stormwater run-off from the Study Area adversely affecting off-site down-slope aquatic features.

6.4 Nesting Raptors and Songbirds

The site lacks trees large enough to support larger tree-nesting raptors such as Swainson's hawk, Cooper's hawk, merlin, and white-tailed kite, and the active agricultural lands appear too disturbed by on-going annual disking for weed and fire control for ground-nesting species such as northern harrier. However, the small trees along the edges of the site provide marginally suitable nesting habitat for loggerhead shrike as well as more common smaller bird species protected by the MBTA.

If present nesting on-site, removal of the nests would impact these species. Furthermore, birds nesting in avoided areas or off-site areas adjacent to construction could be disturbed by construction, which could result in nest abandonment.

6.5 Wintering, Migrating, and Foraging Raptors and Other Birds

The approximately 20 acres of ruderal annual grasslands within the Study Area may provide some form of wintering, migrating and/or foraging habitats for several bird species including the following:

- Cooper's hawk – marginally suitable foraging habitat present;
- Tricolored blackbird - marginally suitable foraging habitat present ;
- Burrowing owl – very limited suitable foraging habitat present;
- Ferruginous hawk – limited suitable winter foraging habitat present;
- Swainson's hawk - marginally suitable foraging habitat present;
- Northern harrier - marginally suitable foraging habitat present;
- White-tailed kite - marginally suitable foraging habitat present;
- Merlin - marginally suitable foraging habitat present; and
- Loggerhead shrike – very limited suitable foraging habitat present.

However, the Study Area has been previously compacted and contains little evidence of rodent use. It is also surrounded on all sides by existing development, and human uses in the vicinity are intense. Project construction will destroy approximately 20 acres of ruderal grasslands that may be used as foraging habitat by some of the above-listed species.

6.6 Burrowing Owl

The approximately 20 acres of ruderal annual grasslands throughout the Study Area provide limited suitable foraging habitat for burrowing owl. Though no suitable nesting sites such as appropriately-sized mammal burrows or burrow surrogates (debris or rock piles) were observed within the Study Area, the field survey was not comprehensive. Potential nesting sites for burrowing owl may be present within the Study Area. Development of the site will result in the loss of 20 acres of potential foraging habitat and may destroy potential nest sites and/or nesting burrowing owls should any be present at the time of construction. Additionally, construction activities potentially could disturb active burrows within 500 feet of the Study Area.

6.7 Protected Tree Impacts

The Study Area lacks trees identified or defined as protected by the City. No impacts to protect trees are expected.

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following are mitigation measures that are often required by CEQA lead agencies for impacts to sensitive biological resources that may be associated with construction of the Project.

7.1 Water Quality

The Project will implement a grading and erosion control plan consistent with City ordinances and the state's National Pollutant Discharge Elimination System permit. In addition, Best Management Practices (BMPs) will be installed prior to construction in accordance with the Storm Water Pollution Prevention Plan (SWPPP). The appropriate BMPs during construction, which may include the following:

- All exposed soils and other fills will be permanently stabilized at the earliest practicable date with the use of hydroseeding and/or other means of revegetation or erosion control.
- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place during the winter and spring months.
- A spill prevention and countermeasure plan shall be developed which would identify proper storage, collection and disposal measures for potential pollutants used onsite. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Soil conservation practices shall be completed during the fall or winter to reduce erosion during spring runoff. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.
- Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures such as terraces, dikes, and ditches shall collect and direct runoff water around vulnerable areas to prepared drainage outlets. Surface roughening, berms, check dams, hay bales, or similar devices shall be used to reduce runoff velocity and erosion.
- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. The applicant will store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.
- Topsoil removed during construction shall be carefully stored. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events.
- Fuel and vehicle maintenance areas will be established away from all drainage courses and will be designed to control runoff.
- Disturbed areas shall be revegetated after completion of construction activities.

7.2 Nesting Raptors and Other Birds

The following nest survey requirements apply if construction activities take place during the typical bird breeding/nesting season (typically February 1 through September 1):

7.2.1 Swainson's Hawk

A targeted Swainson's hawk nest survey shall be conducted throughout all accessible areas within ¼ mile of the proposed construction area no later than 14 days prior to construction activities. If active Swainson's hawk nests are found within ¼ mile of a construction area, construction shall cease within ¼ mile of the nest until a qualified biologist (Project Biologist) determines that the young have fledged, or it is determined that the nesting attempt has failed. If the Applicant desires to work within ¼ mile of the nest, the Applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced. The Project Applicant, the Project biologist, the City, and CDFW shall collectively determine the nest avoidance buffer, and what (if any) nest monitoring is necessary. If an active Swainson's hawk nest is found within the Study Area prior to construction and is in a tree that is proposed for removal, then the Project Applicant shall implement additional mitigation recommended by the Project Biologist based on CDFW guidelines and obtain any required permits from CDFW.

7.2.2 Burrowing Owl

A targeted burrowing owl nest survey shall be conducted of all accessible areas within 500 feet of the proposed construction area within 14 days prior to construction activities utilizing 60 foot transects as outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) (Staff Report). If an active burrowing owl nest burrow (i.e., occupied by more than one adult owl, and/or juvenile owls are observed) is found within 250 feet of a construction area, construction shall cease within 250 feet of the nest burrow until the Project Biologist determines that the young have fledged or it is determined that the nesting attempt has failed. If the Applicant desires to work within 250 feet of the nest burrow, the Applicant shall consult with CDFW and the City to determine if the nest buffer can be reduced. During the non-breeding season (late September through the end of January), the Applicant may choose to conduct a survey for burrows or debris that represent suitable nesting habitat for burrowing owls within areas of proposed ground disturbance, exclude any burrowing owls observed, and collapse any burrows or remove the debris in accordance with the methodology outlined in the Staff Report.

7.2.3 Other Birds

A pre-construction nesting bird survey shall be conducted by the Project Biologist on the Study Area and within a 500-foot radius of proposed construction areas, where access is available, no more than three (3) days prior to the initiation of construction. If there is a break in construction activity of more than two (2) weeks then subsequent surveys shall be conducted.

If active raptor nests, not including Swainson's hawk, are found, no construction activities shall take place within 500 feet of the nest/s until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the City (and CDFW if it is a tricolored blackbird nesting colony) 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 Project Biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

7.2.4 Survey Report

A report summarizing the survey(s), including those for Swainson's hawk and burrowing owl, shall be provided to the City and CDFW within 14 days of the completed survey and prior to start of construction. If work does not occur within 14 days of the survey, an additional survey may be necessary to clear the Study Area. If no nests are found, no further mitigation is required.

7.2.5 Changes to Buffers and Completion of Nesting

Should construction activities cause a nesting bird do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop this agitated behavior, or as otherwise required through consultation with CDFW and the City. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by the Project Biologist in consultation with CDFW and the City.

Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that no new nests have been identified.

7.3 Loss of Foraging Habitat

7.3.1 Swainson's Hawk

Although the 20-acre Study Area contains ruderal annual grasslands which could conceivably be used for foraging by Swainson's hawk, because the site is an infill property and completely surrounded by urban development and has been previously compacted and used for spoils collection and shows very little sign of use by rodents or other typical prey for this species, it is unlikely to be used as foraging habitat. It is generally assumed that Swainson's hawks primarily focus foraging activities within a roughly 2-acre radius around an active nest, and the nearest active nests recorded in the CNDDB are approximately 10 miles northwest of the Study Area. None of the previously recorded nest trees near the Project site have been reported to be active in the last five years, and the nearest known nest trees have been removed or otherwise rendered unusable. The Study Area was subsequently disturbed and mass graded in 2000, and it has been disced annually for fire prevention annually since that time.

Regarding potential cumulative impacts to Swainson's hawk foraging habitat resulting from the construction of the Sheldon Grove project, Madrone analyzed development within one mile of the Study Area between 1998 and 2020 through the interpretation of aerial photography (**Figures 8** and **9**). In this time period, at least 1,000 acres of potential foraging habitat appear to have been supplanted chiefly by residential, commercial, and industrial projects. Development of the approximately 20-acre Sheldon Grove site would constitute less than 2% of land conversion in this area. Previous large-scale development of potential foraging habitat has been occurring over the last two decades, with each of these projects mitigating for their impacts to foraging habitat pursuant to CEQA and the City's ordinance.

Based on the above-listed information, it is our opinion that the Project Area provides only low-quality foraging habitat for Swainson's hawk.

7.3.2 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. The mitigation provided shall be consistent with recommendations in the *Staff Report*.

7.3.3 Other Birds

Approximately 20 acres of ruderal annual grasslands within the Study Area represent potential foraging habitats for the following additional species:

- Cooper's hawk;
- Tricolored blackbird;
- Ferruginous hawk;
- White-tailed kite;
- Northern harrier;
- Merlin; and
- Loggerhead shrike, as well as other birds protected by the MBTA.

These potential foraging habitats will be impacted by construction of the proposed Project. However, as discussed in Section 5.1, the potential for these species to occur within the Study Area is low. Mitigation for impacts to foraging habitat for these species is not required pursuant to CEQA.

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Figures

Figure 1. Site Vicinity

Figure 2. California Natural Diversity Database Occurrences of Special-Status Plant Species

Figure 3. California Natural Diversity Database Occurrences of Special-Status Wildlife Species and Critical Habitats

Figure 4. Vegetation Communities

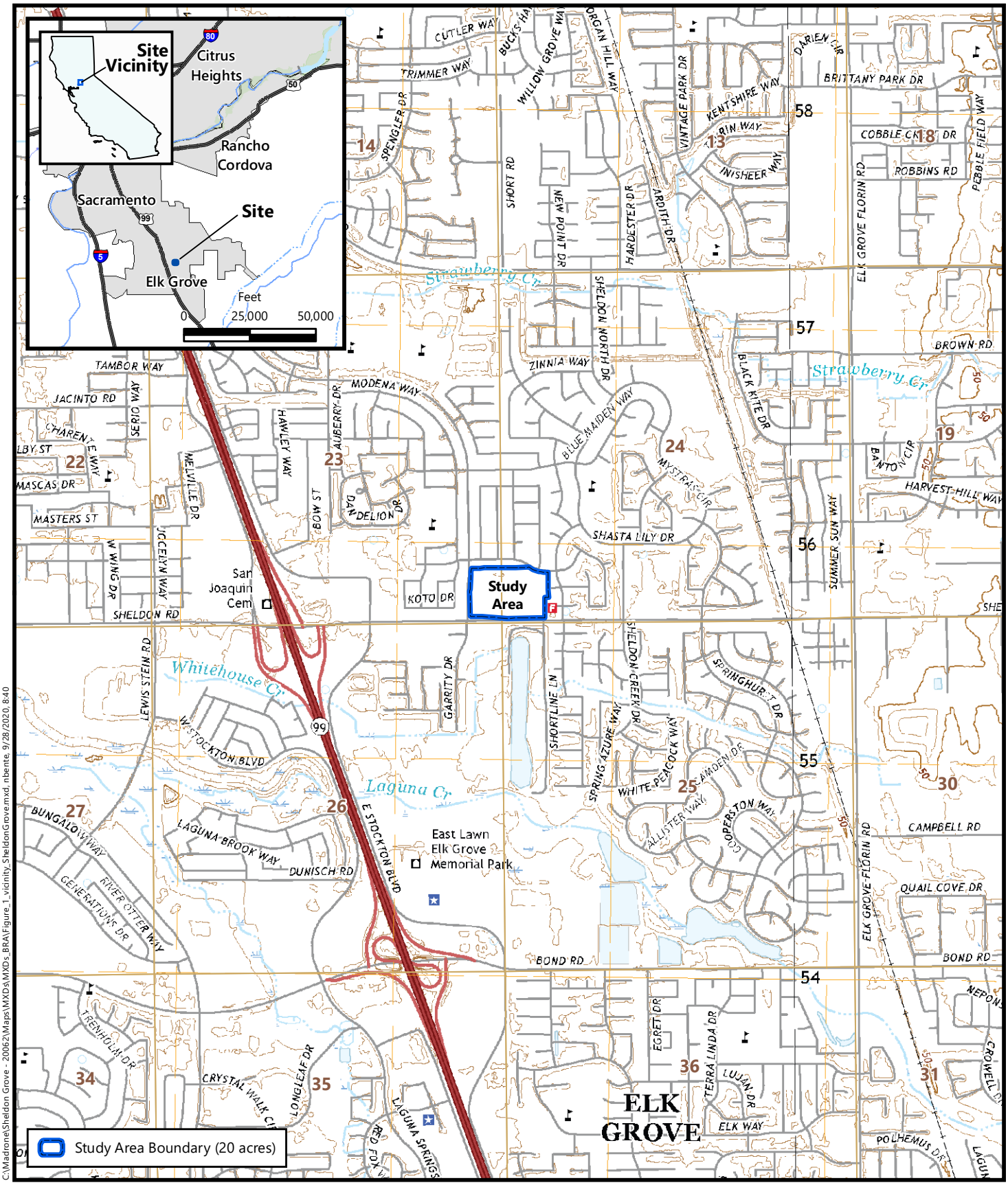
Figure 5. Natural Resources Conservation Service Soils

Figure 6. CNDDB Occurrences of Swainson's Hawk Nests within 0.5 Mile – Sheldon Grove

Figure 7. Active Swainson's Hawk Nests within 10 Miles – Sheldon Grove

Figure 8. August 1998 Aerial Photo – Sheldon Grove

Figure 9. June 2020 Aerial Photo – Sheldon Grove



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Source: United States Geologic Survey, 2018.
Sections 23 and 24, Township 7 North, Range 5 East, MDB&M
"Florin, California" 7.5-Minute Topographic Quadrangle
Longitude -121.389962, Latitude 38.439163

Figure 1
Site Vicinity

Sheldon Grove
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

5-Mile Radius of Study Area
Study Area Boundary (20 acres)

Special-Status Plant Species

1 - Boggs Lake Hedge-Hyssop
2 - Dwarf Downingia
3 - Legenere
4 - Peruvian Dodder
5 - Sanford's Arrowhead

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Miles
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Source: *California Department of Fish and Wildlife*, September 2020.
Basemap Source: *National Geographic* and *ESRI*

Figure 2
California Natural Diversity Database Occurrences of Special-Staus Plant Species
Sheldon Grove
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

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5-Mile Radius of Study Area

Study Area Boundary (20 acres)

Critical Habitat

Delta smelt

Special-Status Species

Birds

- 01 - Burrowing Owl
- 02 - Cooper's Hawk
- 03 - Ferruginous Hawk
- 04 - Merlin
- 05 - Swainson's Hawk
- 06 - Tricolored Blackbird
- 07 - White-Tailed Kite

Invertebrates

- 8 - California Linderiella
- 9 - Midvalley Fairy Shrimp
- 10 - Vernal Pool Fairy Shrimp
- 11 - Vernal Pool Tadpole Shrimp

Reptiles

- 12 - Giant Garter Snake
- 13 - Western Pond Turtle

N

Miles

0 1 2

Source: *California Department of Fish and Wildlife*, September 2020.
Basemap Source: *National Geographic* and *ESRI*

Figure 3
California Natural Diversity Database Occurrences of Special-Staus Wildlife Species and Critical Habitats
Sheldon Grove
Elk Grove, Sacramento County, California

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Figure 4
Vegetation Communities

Sheldon Grove
Elk Grove, Sacramento County, California

Aerial Source: Maxar, 7 November 2019



Soil Survey Source: *USDA, Soil Conservation Service.*
Soil Survey Geographic (SSURGO) database for Sacramento County, California
Aerial Source: Maxar, 7 November 2019

Figure 5
Natural Resources Conservation Service Soils

Sheldon Grove
Elk Grove, Sacramento County, California

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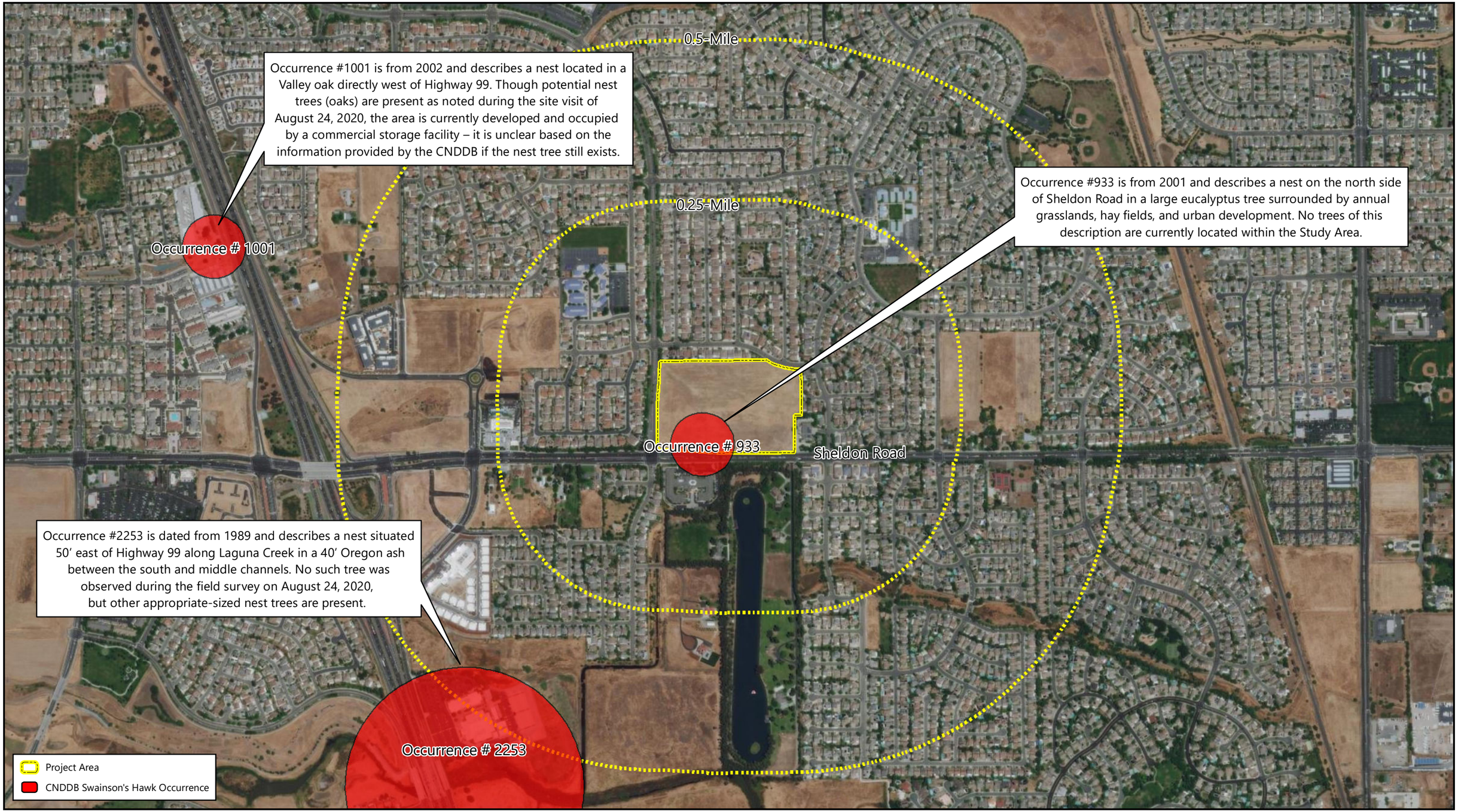

Aerial Source: Maxar, 17 June 2020
CNDDB Source: CDFW, Commercial Version posted December 2020

Figure 6
CNDDB Occurrences of Swainson's Hawk Nests within 0.5 Mile

Sheldon Grove
Elk Grove, Sacramento County, California

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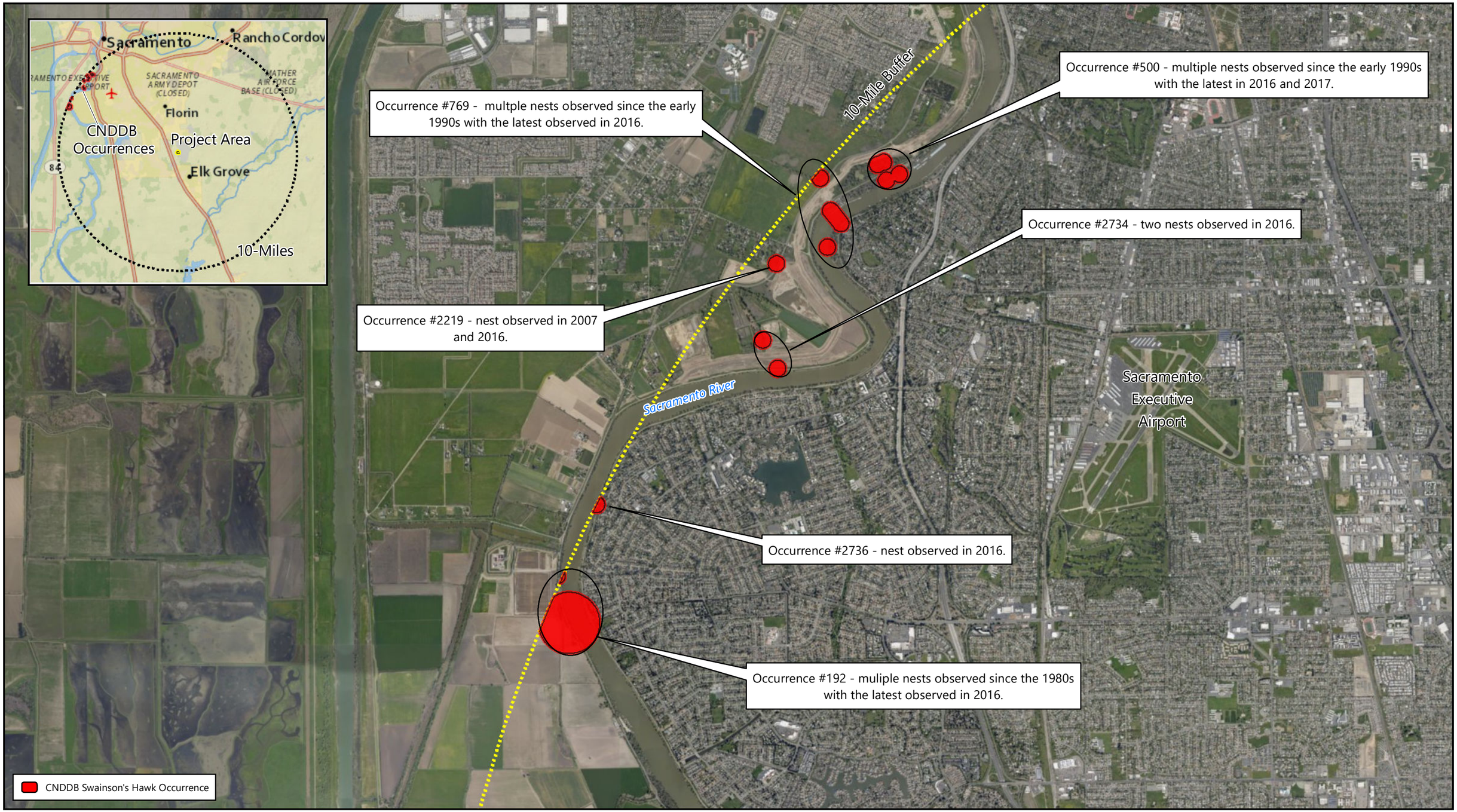

Aerial Source: Maxar, 17 June 2020
CNDDB Source: CDFW, Commercial Version posted December 2020

Figure 7
Active Swainson's Hawk Nests within 10 Miles

Sheldon Grove
Elk Grove, Sacramento County, California

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Aerial Source: Google Earth, August 1998

Figure 8
August 1998 Aerial Photo

Sheldon Grove
Elk Grove, Sacramento County, California

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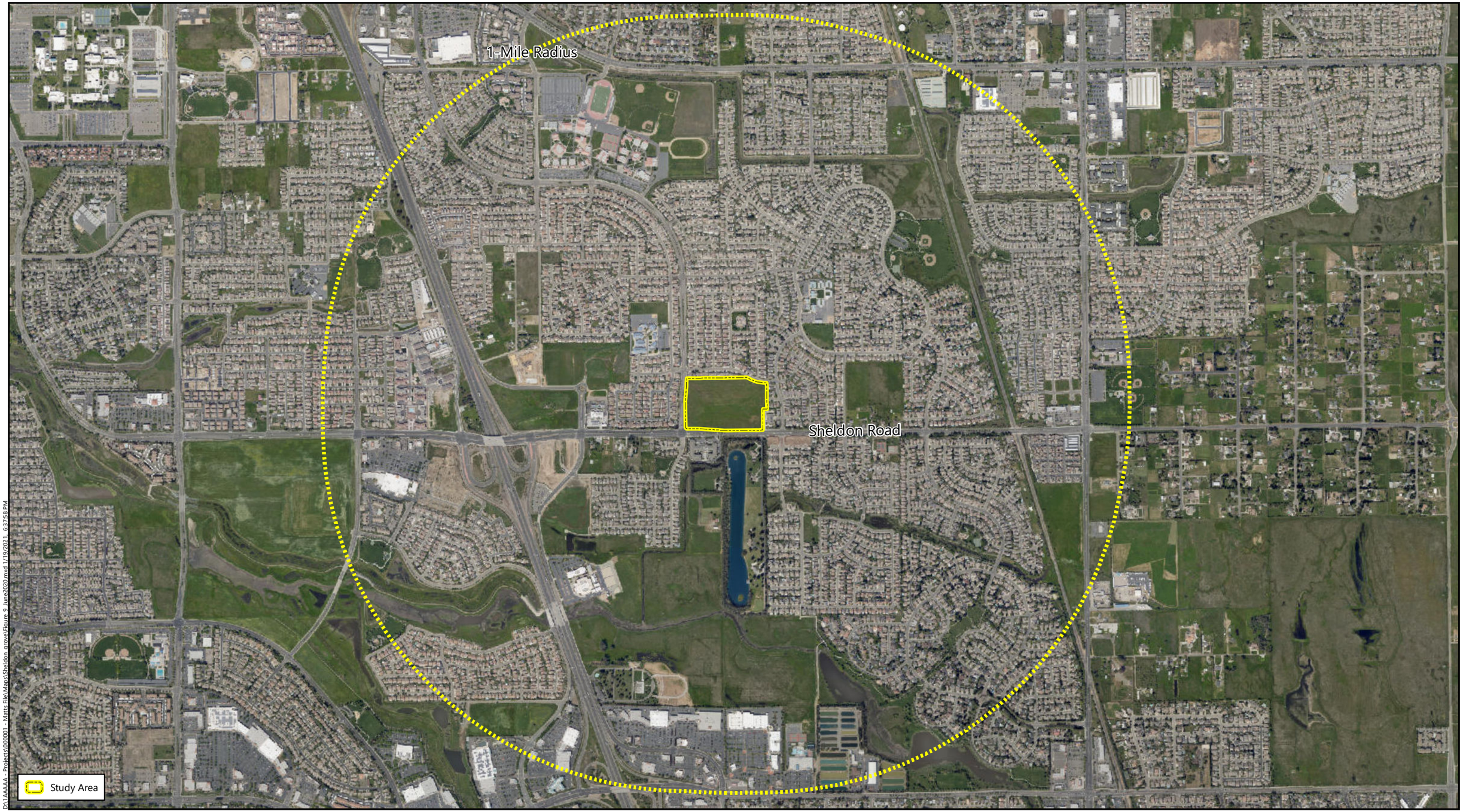

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Aerial Source: Maxar, 7 June 2020

Figure 9
June 2020 Aerial Photo

Sheldon Grove
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Tentative Subdivision Map – Sheldon Grove

Attachment B. IPaC Trust Resource Report for the Study Area

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

Attachment D. Wildlife List

Attachment E. Plant List

Attachment F. Digital Photos

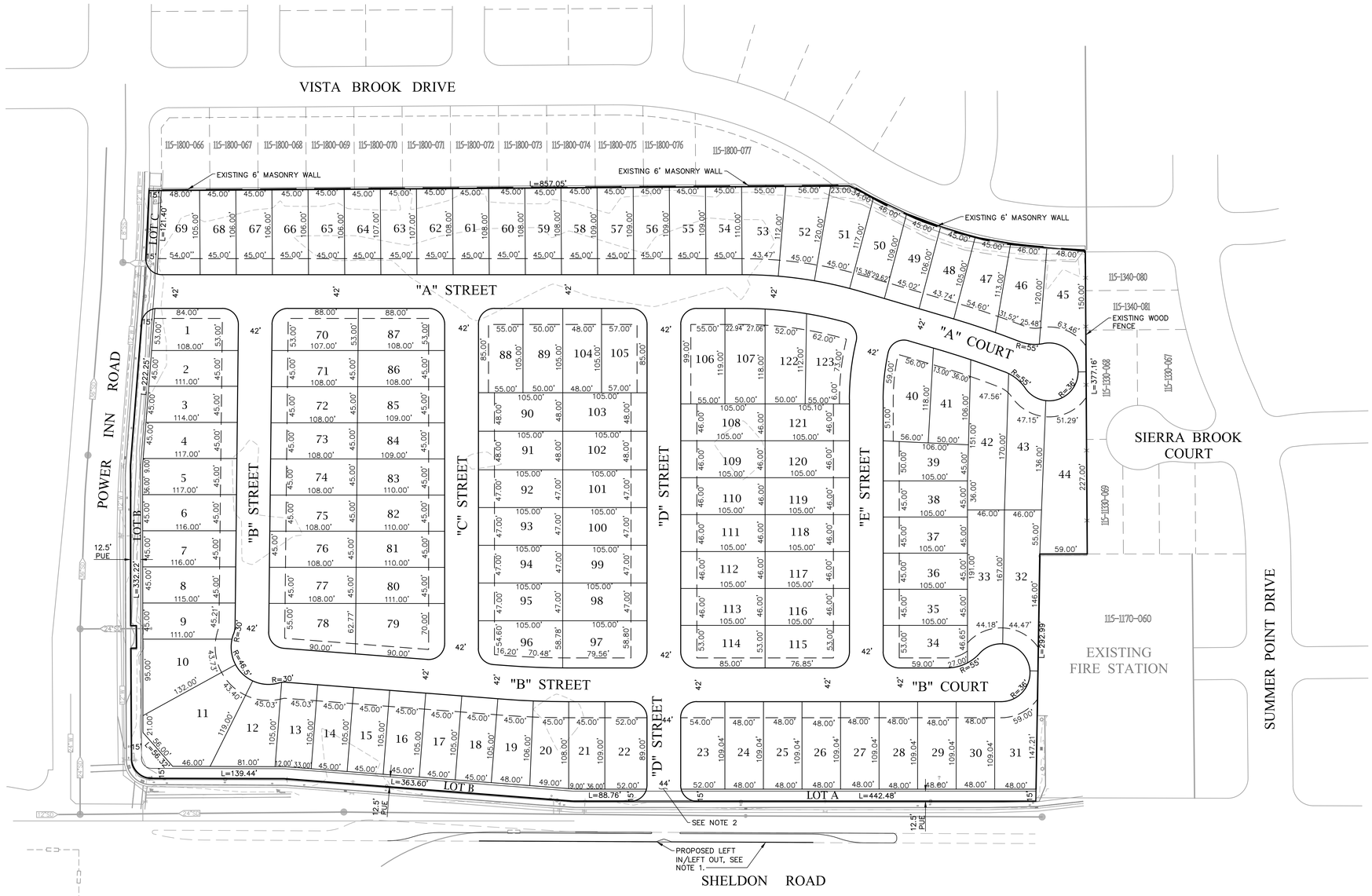
Attachment A

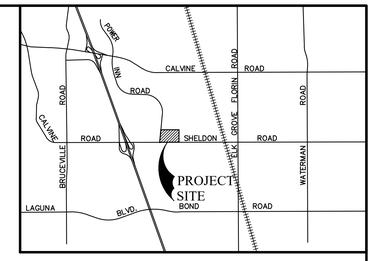
Tentative Subdivision Map – Sheldon Grove

TENTATIVE SUBDIVISION MAP

SHELDON GROVE

CITY OF ELK GROVE, CALIFORNIA





VICINITY MAP
NOT TO SCALE

ACREAGE SUMMARY

LOT USE	ACREAGE
LOTS 1–123 SINGLE FAMILY RESIDENTIAL	15.235
LOT A–LANDSCAPE CORRIDOR	0.152
LOT B–LANDSCAPE CORRIDOR	0.428
LOT C–LANDSCAPE CORRIDOR	0.036
INTERIOR STREET RIGHT OF WAY	3.962
TOTAL	19.813

LEGEND:

EXISTING WATER MAIN WITH SIZE... 6"W

EXISTING GATE VALVE.....

EXISTING MANHOLE.....

EXISTING DRAIN INLET.....

EXISTING DRAIN LINE WITH SIZE..... 12"SD

EXISTING SEWER MAIN WITH SIZE... 6"SS

EXISTING STREET LIGHT.....

NOTES:

1. THE SHELDON ROAD MEDIAN WILL BE RECONSTRUCTED TO PROVIDE A LEFT TURN LANE IN AND LEFT TURN LANE OUT WITH RAISED CURBS AT PROPOSED "D" STREET. FINAL LANE CONFIGURATION AND STACKING LENGTHS WILL BE SUBMITTED TO CITY STAFF DURING THE FINAL SITE PLAN DEVELOPMENT.

2. THE "D" STREET RIGHT-OF-WAY IS PROPOSED AT 44 FEET, WHICH ACCOMMODATES A 12 FOOT TRAVEL LANE IN EACH DIRECTION AND A 10 FOOT RIGHT TURN LANE ON THE SOUTHBOUND SIDE.

COUNTY BENCH MARK:

2" BRASS DISC STAMPED "SAC. CO. DEPT. OF PUBLIC WORKS B.M. 25-68 BOWERS" LOCATED IN TOP SOUTH SIDE OF CONCRETE BASE OF STREET LIGHT #29304 NORTH SIDE OF SHELDON ROAD AT THE NORTHWEST CORNER OF SHELDON ROAD AND SUMMER POINT DRIVE APPROXIMATELY 0.75 MILES EAST OF STOCKTON BOULEVARD. SEE L.L. B-96A PG. 66. LEVELS FROM N.G.S. F-463 AND G1414.

PROJECT NOTES

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P.O. BOX 2042
DAVIS, CA. 95617
PHONE: (916) 712-7059

ASSESSOR'S PARCEL NO.
115-0150-042-0000

AREA
19.813 ACRES

EXISTING GENERAL PLAN
COMMUNITY COMMERCIAL (CC)

PROPOSED GENERAL PLAN
LOW DENSITY RESIDENTIAL (LDR)

EXISTING ZONING
GC

PROPOSED ZONING
RD-7

EXISTING USE
VACANT

PROPOSED USE
SINGLE FAMILY RESIDENTIAL

UTILITY PROVIDERS

WATER SERVICE
ELK GROVE WATER WORKS/COUNTY ZONE 40
PHONE: (916) 685-3556

SANITARY SEWER
COUNTY SANITATION DISTRICT NO. 1
PHONE: (916) 875-5555

STORM DRAIN
CITY OF ELK GROVE
PHONE: (916) 478-3642

FIRE PROTECTION
ELK GROVE/CONSUMES COMMUNITY SERVICE DISTRICT

TELEPHONE
FRONTIER COMMUNICATIONS

CALBE
COMCAST
PHONE: 1-800-266-2278

GAS
PG&E
PHONE: 1-800-743-5000

ELECTRICITY
SMUD
PHONE: 1-888-742-7683

RECREATION
CITY OF ELK GROVE/ELK GROVE CSD

SCHOOL DISTRICT
ELK GROVE UNIFIED SCHOOL DISTRICT

SITE DESCRIPTION:
SACRAMENTO COUNTY
LOT 3 AS SHOWN IN SUBDIVISION BOOK 290 PAGE 7.

EASEMENTS:

I HEREBY STATE THAT ALL EASEMENTS AS INDICATED IN STEWART TITLE COMPANY PRELIMINARY TITLE REPORT NO. CM15017969-AV DATED AS OF JUNE 15, 2020 HAVE BEEN SHOWN HEREON AND/OR HAVE BEEN ACCOUNTED FOR IN NOTE PLACED HEREON. ALL EASEMENTS PROPOSED TO BE ABANDONED OR QUICK CLAIMED AND/OR ALL EASEMENTS THAT CANNOT BE LOCATED.

SIGNED:

JUNE 29, 2020
DATE

REGISTERED PROFESSIONAL ENGINEER STEPHEN ROBERT AU CLAIR No. 30197 Exp. 3-31-22 CIVIL STATE OF CALIFORNIA

JUNE 29, 2020

Andrea Mayer Consulting
Planning + Design
P.O Box 2042
Davis, CA 95617
p 916 712-7059

Au Clair Consulting
ENGINEERS AND SURVEYORS
301 NATOMA ST #103 FOLSOM, CA 95630
916.353.0500

60 0 30 60 120

F:\207-003 (Sheldon Power Inn)\DWG\TM\207-003- Tentative Map.dwg, LocalAdmin, 14:26:19, 07-01-20

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

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.

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.
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:

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Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

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Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2246

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.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act [1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Common Yellowthroat *Geothlypis trichas sinuosa* 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	Breeds May 20 to Jul 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
Nuttall's Woodpecker *Picoides nuttallii* 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	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Song Sparrow *Melospiza melodia* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5

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Spotted Towhee Pipilo maculatus clementae 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/4243	Breeds Apr 15 to Jul 20
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
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

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/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 migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

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) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle 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, please visit the AKN Phenology Tool.

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 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, migrating or present year-round in my project area?

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, 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 Eagle 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 try 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 eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

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.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

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 also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). 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 is not perfect; 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 helps you know what to look for to

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confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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

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.

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THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

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 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 "*Florin, California*" USGS Quadrangle and Eight Surrounding Quadrangles

CNPS California Native Plant Society

Inventory of Rare and Endangered Plants

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

27 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812155, 3812154, 3812153, 3812145, 3812144, 3812143, 3812135 3812134 and 3812133;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May(Jun)	4.2	S3	G5T3
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	May-Nov	1B.2	S2	G3T2
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	perennial herb	Jul-Sep	2B.1	S2?	G5T4T5
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	2B.2	SH	G5T4?
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	4.2	S3	G3
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3

Juglans hindsii	Northern California black walnut	Juglandaceae	perennial deciduous tree	Apr-May	1B.1	S1	G1
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb	Feb-May	4.2	S3	G3
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	perennial herb	May-Jul(Aug-Sep)	1B.2	S2	G5T2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Lepidium latipes var. heckardii	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	1B.2	S1	G4T1
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	1B.1	S2	G2
Navarretia eriocephala	hoary navarretia	Polemoniaceae	annual herb	May-Jun	4.3	S4?	G4?
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	1B.1	S1	G1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G5
Scutellaria lateriflora	side-flowering skullcap	Lamiaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S2	G5
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 14 September 2020].

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Attachment D

Wildlife List

Wildlife Species Observed within the Sheldon Grove Study Area during the 15 September 2020 Field Survey

Species Name	Common name
Birds	
Ardea alba	Great egret
Buteo jamaicensis	Red-tailed hawk
Meleagris gallopavo	Wild turkey
Mimus polyglottos	Northern mockingbird
Zenaida macroura	Mourning dove
Mammals	
Felis catus	Domestic cat

Attachment E

Plant List

Plant Species Observed within the Sheldon Grove Study Area during the 15 September 2020 Field Survey

Species Name	Common Name	Wetland Indicator Status
Asclepias fascicularis	Narrow-leaf milkweed	FAC
Avena fatua	Wild oat	UPL
Bromus diandrus	Ripgut grass	UPL
Bromus hordeaceus	Soft chess	FACU
Cichorium intybus	Chicory	FACU
Convolvulus arvensis	Bindweed	UPL
Croton setigerus	Doveweed	UPL
Cynodon dactylon	Bermuda grass	FACU
Cyperus eragrostis	Tall nutsedge	FACW
Dittrichia graveolens	Stinkwort	UPL
Elymus caput-medusae	Medusa-head	UPL
Epilobium brachycarpum	Panicled willow-herb	UPL
Erigeron canadensis	Canadian horseweed	FACU
Erodium botrys	Long-beaked stork's bill	FACU
Euphorbia maculata	Spotted sandmat	UPL
Galium aparine	Goose grass	FACU
Geranium dissectum	Cut leaf geranium	UPL
Hordeum marinum	Seaside barley	FAC
Hordeum murinum	Wall barley	FACU
Lactuca serriola	Prickly lettuce	FACU
Lolium perenne	Perennial rye	FAC
Lythrum hyssopifolia	Hyssop loosestrife	OBL
Malva parviflora	Cheeseweed mallow	UPL
Plantago lanceolata	English plantain	FAC
Polygonum aviculare	Prostrate knotweed	FAC
Robinia pseudoacacia	Black locust	FACU
Rubus armeniacus	Himalayan blackberry	FAC
Rumex crispus	Curly dock	FAC
Sorghum halepense	Johnson grass	FACU
Ulmus pumila	Siberian elm	UPL

Attachment F

Digital Photos



P:\000001 - Matts File\Maps\Sheldon grove\photo points sheldon grove .mxd 9/15/2020 11:20:51 AM

Photo Point Locations

Aerial Source: Maxar, 17 November 2019

Sheldon Grove
Elk Grove, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING



Photo Point 1- View to the north.



Photo Point 1- View to the south.

Sheldon Grove
Photos: 15 September 2020



Photo Point 1- View to the west.



Photo Point 2 – View to the north.

Sheldon Grove
Photos: 15 September 2020



Photo Point 2 – View to the east.



Photo Point 2 – View to the south.

Sheldon Grove
Photos: 15 September 2020



Photo Point 2 – View to the west of the patch of gravel, which represents an aerial signature.



Photo Point 3 – View to the north.

Sheldon Grove
Photos: 15 September 2020



Photo Point 3 – View to the east.



Photo Point 3 – View to the south.

Sheldon Grove
Photos: 15 September 2020



Photo Point 3 – View to the west.



Photo Point 4 – View to the north.

Sheldon Grove
Photos: 15 September 2020



Photo Point 4 - View to the east of the fire station.



Photo Point 4 – View to the south.

Sheldon Grove
Photos: 15 September 2020



Photo Point 4- View to the west.

APPENDIX D

GEOTECHNICAL ENGINEERING REPORT

Geotechnical Engineering Report

SHELDON GROVE SUBDIVISION

WKA No. 12865.02

September 8, 2020

Prepared for:

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Geotechnical Engineering Report

SHELDON GROVE SUBDIVISION

Elk Grove, California

WKA No. 12865.02

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SHELDON GROVE SUBDIVISION
Power Inn Road and Sheldon Road
Elk Grove, California
WKA No. 12865.02
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INTRODUCTION

We have completed a geotechnical engineering study for the proposed Sheldon Grove residential subdivision (a.k.a. Arcadian Village 2) to be constructed at the northeast intersection of Power Inn Road and Sheldon Road in Elk Grove, California. The purpose of our study has been to explore the existing site, soil and groundwater conditions across the property, and to provide geotechnical engineering conclusions and recommendations for design and construction of the proposed residential development. This report presents the results of our study.

Scope of Services

Our scope of services included the following tasks:

1. perform site reconnaissance;
2. review of United States Geological Survey (USGS) topographic maps, historical aerial photographs, and available groundwater data;
3. review of previous studies performed in the site vicinity;
4. perform subsurface explorations, including the excavating and sampling of six exploratory test pits to depths ranging from approximately five to ten feet below the existing site grades;
5. collect representative bulk samples of near-surface soils;
6. perform laboratory testing of selected soil samples to determine various soil engineering properties;
7. perform engineering analyses; and,
8. preparation of this report.

Previous Studies

Supplemental information reviewed during the preparation of this report included the following reports:

- Wallace-Kuhl & Associates, Inc., 2001, *Geotechnical Engineering Report* prepared for Arcadian Village 2, WKA No. 4782.01, May 8, 2001;
- Wallace-Kuhl & Associates, Inc., 2001, *Geotechnical Engineering Report* prepared for the Arcadian Village Trunk Sewer, WKA No. 4782.04, October 9, 2001;
- Wallace-Kuhl & Associates, Inc., 2001, *Geotechnical Engineering Report* prepared for Arcadian Village Unit 2, WKA No. 4782.06, December 28, 2001; and,
- Wallace-Kuhl & Associates, 2020, *Phase I Environmental Site Assessment* prepared for Sheldon Grove Subdivision, WKA No. 12865.01, August 12, 2020.

Figures and Attachments

This report contains a Vicinity Map as Figure 1; a Site Plan showing the approximate locations of our exploratory test pits as Figure 2; Logs of Test Pits completed for this study as Figures 3 through 8. An explanation of the symbols and classification system used on the logs is contained in Figure 9. Appendix A contains general information regarding project concepts, exploratory methods used during the field exploration phase of this study, an explanation of laboratory testing accomplished, and laboratory test results not presented in the test pit logs. Appendix B contains *Earthwork Specifications* that may be used in the preparation of project plans and contract documents. Appendix C contains a copy of our pavement design calculations.

Project Description

We understand the somewhat rectangular-shaped property encompasses a total area of approximately 19.8 acres, and is identified as Sacramento County Assessor's Parcel Number 115-0150-042. The property was previously designated for a commercial development. However, the property will be subdivided into 123, single-family residential lots. Residential construction is anticipated to consist of one- and two-story, wood-framed dwellings with interior concrete slabs-on-grade lower floors. Structural loads are anticipated to be relatively light based on this type of construction. Associated improvements will include the construction of underground utilities, landscaping, perimeter block walls, exterior flatwork, and asphalt paved interior residential streets.

Grading plans were not available; however based on the relatively flat topography, we anticipate maximum excavations and fills on the order of one to three feet for residential development of the property.

FINDINGS

Site Conditions and History

The rectangular-shaped site is located northeast of the intersection of Power Inn Road and Sheldon Road, in Elk Grove, California (see Figure 1). The property is bounded to the north and east by residential homes; to the west by Power Inn Road beyond which is residential homes; to the south by Sheldon Road beyond which is Camden Springs Gracious Retirement Living center.

At the time of our field explorations on August 10, 2020, the site was generally vacant and undeveloped, supporting a moderate growth of voluntary grass which was recently plowed to a depth of at least 12 inches for fire suppression purposes. Household debris including, but not limited to, clothing, chairs, and plastic totes were observed along the northern property boundary.

According to the USGS topographic map of Florin Quadrangle, 7.5-minute series, dated 2012, ground surface elevations at the site are indicated to be on the order of +34 feet relative to the North American Vertical Datum of 1988 (NAVD88).

Our records indicate that, between August 8 and 24 of 2001, this office observed and tested the processing of the original ground of the subject site (Commercial Pad, a.k.a. Pad F), as well as placement of approximately 1 to 1½ feet of fill on the site. Our test results revealed that the original ground and fill soils were moisture conditioned to at least the optimum moisture and compacted to at least 90 percent of the maximum dry density, as determined by ASTM D1557 specifications.

Historical Aerial Photographs

Review of historical aerial photographs taken in 1993, 1998, 2002 through 2016, and 2018 through 2020 indicates that the property has remained vacant and undeveloped from 1993 to 2020.

Site Geology

The 1985 USGS *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California* shows the site to be underlain by the lower member of the Riverbank Formation (Qrl) which generally consists of gravel, sand, and silt. The mapped geology for the site is generally consistent with the subsurface soil conditions encountered during the field explorations.

Subsurface Conditions

Based on test pits TP1 through TP6, the surface and near-surface soils encountered generally consist of a layer of disturbed and disced soil to depths of six inches to one foot below ground surface (bgs). Beneath the disturbed soils, a discontinuous layer of silty sand with clay to sandy clayey silt was encountered in TP1, TP3, and TP4 to about three to five feet bgs. Beneath the surface and near-surface silty sand with clay to sandy clayey silt, alternating layers of silty clay to variably cemented clayey silty sand and clayey silt with sand were encountered to the maximum explored depth of ten feet below existing site grades. Beneath the disturbed soils in TP2, TP5, and TP6, a discontinuous layer of sandy, silty clay with gravel to silty clay with gravel to silty clay with sand to about four to five feet bgs. Beneath the surface and near-surface soils, alternating layers of clayey silt with sand to silty clay to variably cemented silty sand were encountered to the maximum explored depth of about ten feet bgs.

At the completion of the test pits, the excavation spoils were used to backfill the excavations in thin lifts compacted with a sheepsfoot wheel attachment.

The approximate locations of the test pits are shown in Figure 2. For specific information regarding the subsurface conditions at a specific location, please refer to the Logs of Test Pits, Figures 3 through 8.

Groundwater

Groundwater was not encountered in test pits TP1 through TP6 during the subsurface exploration performed on August 10, 2020. To supplement our groundwater data, we reviewed available groundwater information at the California Department of Water Resources (DWR) website. The DWR periodically monitors groundwater levels in wells across the state. Their website shows an irrigation well located about ½ mile west of the site. The well is identified as State Well No. 07N05E26C001M with a ground surface elevation of about +31 feet NAVD88. Groundwater data for this well was recorded from May 1963 to at least November 2008. Data shows the highest recorded groundwater elevation was at about -24 feet NAVD88 (about 55

feet bgs) at the well on May 10, 1963. The lowest recorded groundwater elevation was at about -63 feet NAVD88 (about 94 feet bgs) at the well on September 25, 1981. Based on this data, groundwater elevations in the site vicinity likely have been deeper than about 58 feet below the subject property grades during the period of 1963 to 2008.

CONCLUSIONS

Building Support

Based on our field and laboratory testing results, the upper 6 to 12 inches of near-surface soils across the site were observed to be severely disturbed due to weed abatement (discing). The disturbed soils are not considered capable of supporting the proposed construction in their current condition, and will require re-processing and re-compaction for adequate support of foundations, interior floor slabs, exterior flatwork and pavements.

The underlying undisturbed soils are considered capable of supporting the planned residential structures and pavements, provided the recommendations of this report are carefully followed. Our work also indicates new engineered fill that is properly placed and compacted in accordance with the recommendations of this report will be capable of supporting the proposed structures and pavements.

The proposed residential structures may be supported on a shallow foundation system provided the recommendations of this report are carefully followed. Post-construction settlement of new footings is expected to be less than one inch, and differential settlement is estimated to be about ½ inch for a distance of 50 feet.

2019 California Building Code Seismic Design Parameters

The 2019 *California Building Code* (CBC) references the *American Society of Civil Engineers* (ASCE) *Standard 7-16* for seismic design. To assist with the structural design of this project, we have provided the following seismic design parameters in Table 1, which have been determined based on the site location and the web interface developed by the *Structural Engineers Association of California* (SEAOC) and the *California Office of Statewide Health Planning and Development* (OSHPD) (https://seismicmaps.org). Since S_1 is greater than 0.2 g, the 2019 CBC coefficient values F_v, S_{M1}, and S_{D1} presented below in Table 1 are valid for seismic design of this project, provided the requirements in Exception Note No. 2 in Section 11.4.8 of *ASCE 7-16* are met. If not, a site-specific ground motion hazard analysis is required.

TABLE 1
SEISMIC DESIGN PARAMETERS

Latitude: 38.4391° N Longitude: 121.3899° W	ASCE 7-16 Table/Figure	2019 CBC Figure/Section/Table	Factor/ Coefficient	2019 CBC Values
0.2-second Period MCE_R	Figure 22-1	Figure: 1613.2.1(1)	S_S	0.544 g
1.0-second Period MCE_R	Figure 22-2	Figure: 16113.2.1(2)	S_1	0.245 g
Soil Class	Table 20.3-1	Section: 1613.2.2	Site Class	D
Site Coefficient	Table 11.4-1	Table: 1613.2.3(1)	F_a	1.365
Site Coefficient	Table 11.4-2	Table: 1613.2.3(2)	F_v	2.110*
Adjusted MCE_R Spectral Response Parameters	Equation 11.4-1	Equation: 16-36	S_{MS}	0.743 g
	Equation 11.4-2	Equation: 16-37	S_{M1}	0.517 g*
Design Spectral Acceleration Parameters	Equation 11.4-3	Equation: 16-38	S_{DS}	0.495 g
	Equation 11.4-4	Equation: 16-39	S_{D1}	0.345 g*
Seismic Design Category	Table 11.6-1	Table: 1613.2.5(1)	Risk Category I, II, or III	D
	Table 11.6-2	Table: 1613.2.5(2)	Risk Category I, II, or III	D

Notes: MCE_R = Risk-Targeted Maximum Considered Earthquake; g = gravity
* = The value is valid provided the requirements in Exception Note No. 2 in Section 11.4.8 of ASCE 7-16 are met. If not, a site-specific ground motion hazard analysis is required.

Liquefaction Potential

Liquefaction is a soil strength and stiffness loss phenomenon that typically occurs in loose, saturated, cohesionless soil as a result of strong ground shaking during earthquakes. The potential for liquefaction at a site is usually determined based on the results of a subsurface geotechnical investigation and the groundwater conditions beneath the site.

Based on the variably cemented condition of the soils encountered in our test pits, the geologic age of the Pleistocene deposits at the site, and the lack of groundwater within the upper 50 feet of the site, we conclude that the potential for liquefaction to occur at this site during a seismic event is very low. To our knowledge, there have been no reported instances of liquefaction having occurred within the Elk Grove area during the major earthquake events of 1892 (Vacaville-Winters), 1906 (San Francisco), 1989 (Loma Prieta) and 2014 (South Napa).

Excavation Conditions

Based on the information obtained from the exploratory test pits and our local experience, we anticipate the soils at the site will be readily excavatable with conventional excavating and trenching equipment. The cemented soils on the site may be slower to excavate and could require increased effort. In our opinion, shallow excavations less than five feet in depth will stand at a near-vertical inclination for the short periods of time required for utility construction. However, minor sloughing and "running" conditions may occur if the soils are saturated, or if zones of clean (cohesionless) sands are encountered, and subjected to construction vibrations or allowed to dry significantly. If these conditions are encountered, the contractor should be prepared to brace or shore the excavations.

Excavations or trenches exceeding five feet in depth that will be entered by workers should be sloped, braced or shored to conform to current Occupational Safety and Health Administration (OSHA) and Cal/OSHA requirements. The contractor must provide an adequately constructed and braced shoring system in accordance with federal, state and local safety regulations for individuals working in an excavation that may expose them to the danger of moving ground.

Temporarily sloped excavations less than 20 feet in height, if any, should be constructed no steeper than a one horizontal to one vertical (1H:1V) inclination. Temporary slopes likely will stand at this inclination for the short-term duration of construction, provided significant pockets of loose and/or saturated granular soils are not encountered. Flatter slopes would be required if these conditions are encountered.

Excavated materials should not be stockpiled directly adjacent to open excavations to prevent surcharge loading of the excavation sidewalls. Excessive truck and equipment traffic should be avoided near open excavations. If material is stored or heavy equipment is stationed and/or operated near an excavation, a shoring system must be designed to resist the additional pressure due to the superimposed loads.

On-Site Soil Suitability for Engineered Fill Construction

The on-site soils encountered in the test pits are considered suitable for use in engineered fill construction, provided these materials do not contain debris, rubble, organics and particles larger than three inches in maximum dimension, and are at a suitable moisture content to achieve the desired degree of compaction.

Expansive Soils

The surface and near-surface soils are somewhat variable throughout the site. Laboratory tests performed on surface and near-surface soils revealed these materials possess low to high plasticity (Plasticity Indices of 11 and 25) when tested in accordance with ASTM (ASTM International) D4318 test method, as shown in Figure A1 in Appendix A. In addition, laboratory tests also revealed these materials possess a "low" to "medium" expansion potential when tested in accordance with ASTM D4829 test method, as shown in Figures A2 and A3. Previous testing for nearby developments revealed that moderately to highly expansive clay soils are present in the site vicinity.

Based on these test results, the near-surface soils at the site are considered capable of exerting moderate to high expansion pressures on building foundations, foundation slabs and exterior flatwork. Specific recommendations to reduce the effects of expansive soils, including using deeper exterior foundation embedment depth, and moisture conditioning the slab soil subgrade prior to concrete placement, are presented in this report.

Pavement Subgrade Quality

Laboratory test results of two selected soil samples indicate the on-site soils are considered poor to good quality materials for the support of asphalt concrete pavements with Resistance ("R") values of 5 and 51, when tested in accordance with California Test 301 (see Figure A4). Based on the R-value test results and our experience in the area, we have selected an R-value of five for the calculation of alternate asphalt pavement sections presented in this report.

Groundwater

Based on available groundwater information for the site, it is our opinion that permanent groundwater should not be a significant factor in the proposed development of this site. However, perched water should be anticipated above the relatively dense and variably cemented soils encountered at various depths across the site.

Seasonal Water

During the wet season, infiltrating surface runoff water can create saturated surface conditions. Grading operations attempted following the onset of winter rains and prior to prolonged drying periods will be hampered by high soil moisture contents. Such soils, intended for use as engineered fill, will require considerable aeration and/or drying to reach a moisture content that will permit the soils to be properly compacted.

Soil Corrosion Potential

One sample of near-surface soil collected from TP2 was submitted to Sunland Analytical of Rancho Cordova, California, for testing to determine minimum resistivity, pH, chloride, and sulfate concentrations to help evaluate the potential for corrosive attack upon reinforced concrete and buried metal. The results of the corrosivity testing are summarized in Table 2 and copies of the analytical test reports are presented in Figures A6 and A7.

TABLE 2
SOIL CORROSIVITY TESTING

Analyte	Test Method	TP2 (0'-3')
pH	CA DOT 643 Modified*	6.76
Minimum Resistivity	CA DOT 643 Modified*	2950 Ω-cm
Chloride	CA DOT 422m	2.7 ppm
Sulfate	CA DOT 417	11.0 ppm
Sulfate-SO4	ASTM D-516m	11.2 mg/kg

NOTE: * = Small cell method, ϑ-cm = Ohm-centimeters, ppm = Parts per million, mg/kg = Milligram per kilogram

The California Department of Transportation Corrosion and Structural Concrete Field Investigation Branch, Corrosion Guidelines (Version 3.0 dated January 2018), considers a site to be corrosive to foundation elements if one or more of the following conditions exists for the representative soil and/or water samples taken: has a chloride concentration greater than or equal to 500 ppm, sulfate concentration greater than or equal to 1500 ppm, or the pH is 5.5 or less. Based on this criterion, the on-site soils tested are not considered corrosive to steel reinforcement properly embedded within Portland cement concrete (PCC).

Table 19.3.1.1 – Exposure Categories and Classes, of American Concrete Institute (ACI) 318-19, Section 19.3 – Concrete Durability Requirements, as referenced in Section 1904.1 of the 2019 CBC, indicates the severity of sulfate exposure for one of the samples tested is Exposure Class S0. Exposure Class S0 is assigned for conditions where the water-soluble sulfate concentration in contact with concrete is low and injurious sulfate attack is not a concern. The project Structural Engineer should review the requirements of ACI 318 and determine their applicability to the site.

Wallace-Kuhl & Associates are not corrosion engineers. Therefore, if it is desired to further define the soil corrosion potential at the site, a Corrosion Engineer should be consulted.

RECOMMENDATIONS

General

Grading plans were not available at the time this report was prepared; however, we anticipate that maximum excavations and fills on the order of one to three feet are planned for the residential development of the site. The recommendations contained in this report are based upon this assumption. We consider it essential that our office review grading and structural foundation plans to verify the applicability of the following recommendations, and to provide supplemental recommendations, as conditions dictate.

Also, the recommendations presented below are appropriate for typical construction in the late spring through fall months. The on-site soils likely will be saturated by rainfall in the winter and early spring months, and will not be compactable without drying by aeration or the addition of lime (or a similar product). Should the construction schedule require work to continue during the wet months, additional recommendations can be provided, as conditions warrant.

Site preparation should be accomplished in accordance with the provisions of this report. A representative of the Geotechnical Engineer should be present during site grading to evaluate compliance with our recommendations and the approved project plans and specifications. The Geotechnical Engineer of Record referenced herein should be considered the Geotechnical Engineer that is retained to provide geotechnical engineering observation and testing services during construction.

Site Clearing

Prior to grading, remnants of any previous construction staging operation, subsurface improvements, (if encountered) designated for removal should be demolished and construction areas should be cleared of surface and subsurface structures (including but not limited to miscellaneous surface trash, rubble, deleterious debris, fencing, etc.) associated with previous site activities to expose firm and stable soils, as determined by the Geotechnical Engineer's representative. Clearing debris should be removed from the site. On-site soils may be used as engineered fill, provided the debris is in accordance with the criteria included in the On-site Soil Suitability for Engineered Fill Construction section of this report and approved by the owner. Any existing underground utilities designated to be removed or relocated should include removing all trench backfill and associated pipe bedding material, and be replaced with engineered fill. On-site wells and septic systems/tanks not designated to remain (if any), should be properly abandoned in accordance with the Sacramento County Environmental Management Department requirements.

Trees and shrubs designated for removal should include the entire rootball and roots larger than ½-inch in diameter. Adequate removal of debris and roots may require laborers and handpicking to clear the subgrade soils to the satisfaction of the Geotechnical Engineer's representative.

Depressions resulting from site clearing activities mentioned above, as well as all loose, disturbed, saturated, or organically contaminated soils, as identified by the Geotechnical Engineer's representative, should be removed to expose firm, undisturbed soil, as determined by the Geotechnical Engineer's representative. The excavations should be restored grade with engineered fill compacted in accordance with the recommendations of this report. It is considered essential that the Geotechnical Engineer's representative be notified prior to site clearing operations to schedule periodic site visits.

Difficulty in achieving subgrade compaction or unusual soil instability may be indications of loose fill associated with past subsurface items such as utility lines, deeper fills, etc. Should these conditions exist, the materials should be excavated to check for subsurface structures and the excavations backfilled with engineered fill in accordance with the recommendations included in this report. We recommend that construction bid documents include a unit price (per cubic yard) for all additional excavation required to remove unanticipated materials, as determined by the Geotechnical Engineer's representative, and replaced with engineered fill.

Structural areas should be stripped of surface vegetation and organically contaminated topsoil; strippings may be stockpiled for later use or disposed of off-site. *If used, on-site strippings may be placed in landscaped areas, provided they are kept at least five feet from the building pads, and are moisture conditioned and compacted*. *Strippings should not be used in landscaped berms, or other fill areas, that will support either retaining walls, sound walls, or concrete flatwork.* Discing of the organics into the surface soils may be a suitable alternate to stripping, depending on the condition and quantity of the organics at the time of grading. The decision to utilize discing in lieu of stripping should be made by the Geotechnical Engineer's representative at the time of earthwork construction. Discing operations, if approved, should be observed by the Geotechnical Engineer's representative and must be continuous until the organics are adequately mixed into the surface soils to provide a compactable mixture of soil containing only minor amounts of organics. Pockets or concentrations of organics will not be allowed.

Site Preparation and Engineered Fill Construction

Following site clearing activities, the disturbed soils and construction areas should be over-excavated to a depth of at least 12 inches and the exposed soil should be scarified to a depth of at least twelve inches, thoroughly moisture conditioned to at least the optimum moisture content for granular soils, or at least two percent above the optimum moisture content for clay soils, and uniformly compacted to not less than 90 percent of the maximum dry density as determined by the ASTM D1557 test method.

Subgrade preparation operations should extend at least five feet beyond the building pads, including adjacent flatwork, and two feet beyond pavement areas, where practical. Compaction of all soil subgrades should be performed using a heavy, self-propelled, sheepsfoot compactor capable of achieving the required compaction and must be performed in the presence of the Geotechnical Engineer's representative who will evaluate the performance of subgrade under compactive load and identify any loose or unstable soils conditions that could require additional excavation.

On-site soils are considered suitable for use in engineered fill construction, provided that these materials do not contain rubble, rubbish, concentrations of organics, or particles larger than three inches in maximum dimension. Imported fill materials, if required, should be similar to but less expansive than native soils, and should not contain particles greater than three inches in maximum dimension. Imported soils should be approved by the Geotechnical Engineer prior to being transported to the site. Also, if import fills are required (other than aggregate base), the contractor should provide appropriate documentation that the import is clean of known contamination and within acceptable corrosion limits.

Engineered fill should be placed in relatively level lifts that do not exceed six inches in compacted thickness. Native materials and approved import materials should be thoroughly moisture conditioned to at least above the optimum moisture content for granular soils, or at least two percent above the optimum moisture content for clay soils, and uniformly compacted to at least 90 percent of maximum dry density as determined by the ASTM D1557 test method.

The upper 12 inches of final building pad subgrades should be brought to at least two percent above the optimum moisture content and uniformly compacted to not less than 90 percent of the maximum dry density, as determined by ASTM D1557, regardless of whether final grade is completed by excavation, filling or left at existing grade.

The upper six inches of pavement subgrades should be uniformly compacted to at least 95 percent of the ASTM D1557 maximum dry density at a moisture content of at least the optimum moisture, and must be stable under construction traffic prior to placement of aggregate base. Final pavement subgrade processing and compaction should be performed just prior to placement of aggregate base, after construction of underground utilities is complete.

Permanent excavation and fill slopes should be constructed no steeper than two horizontal to one vertical (2H:1V), and should be vegetated as soon as practical following grading to minimize erosion.

All earthwork operations should be accomplished in accordance with the recommendations contained within this report and the *Earthwork Specifications* provided in Appendix B. We recommend the Geotechnical Engineer's representative be present on a regular basis during all earthwork operations to observe and test the engineered fill and to verify compliance with the recommendations of this report and the project plans and specifications.

Utility Trench Backfill

Utility trench backfill within structural areas should be mechanically compacted as engineered fill in accordance with the following recommendations. Bedding of utilities and initial backfill around and over the pipe should be in accordance with the manufacturer's recommendations for the pipe materials selected, and applicable City of Elk Grove requirements.

We recommend only native soils (in lieu of select gravel or sand backfill) be used as general backfill for utility trenches located within the building footprints and where trenches cross from landscape areas to structural areas (buildings, areas supporting exterior flatwork, driveways, etc.) to help minimize soil moisture variations beneath the structures. The native soil backfill should extend at least three feet horizontally inside and outside the perimeter foundation lines.

Utility trench backfill should be placed in relatively thin, level lifts, moisture conditioned to at least the optimum moisture content for granular soils, or at least two percent above the optimum moisture content for clay soils, and mechanically compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557. Actual lift thickness will depend on the material type and type of compaction equipment utilized during construction, but should not be more than 12 inches. The upper six inches of utility backfill within the limits of pavements should be compacted to at least 95 percent relative compaction (ASTM D1557) at a minimum of the optimum moisture content. Trench backfill materials and compaction within street right-of-ways should conform to the applicable portions of the current City of Elk Grove Standards, latest edition. Utility trench backfill should be continuously observed and tested during construction.

We recommend that underground utility trenches, which are aligned nearly parallel with foundations, be at least three feet from the outer edge of foundations. Trenches should not encroach into the zone extending outward at a one horizontal to one vertical (1H:1V) inclination below the bottom of the foundations. Trenches near foundations should not remain open longer than 72 hours to prevent drying and formation of desiccation and shrinkage cracks. The intent of these recommendations is to prevent loss of both lateral and vertical support of foundations, resulting in possible settlement.

Foundation Design

Based upon results of our study and our knowledge and experience with similar projects in the area, the proposed one- and two-story residential structures can be supported on conventional continuous perimeter foundations and isolated/continuous interior spread foundations embedded at least 18 inches below lowest adjacent soil grade bearing on firm native soils or engineered fill. Lowest soil grade is defined as either the adjacent exterior soil grade or the soil grade beneath the buildings on which capillary break material is placed, whichever is lower. A continuous, reinforced foundation should be utilized for the perimeter of the structures to reduce the potential for moisture infiltration beneath the interior slab-on-grade of the structures. Continuous foundations should be at least 12 inches wide; isolated spread foundations should maintain a minimum 18-inch dimension.

Foundations bearing on firm undisturbed or re-compacted native soils, engineered fill, or a combination of those materials may be sized for maximum allowable soil pressures of 2000 pounds per square foot (psf) for dead load plus live load with a 1/3 increase for consideration of seismic or wind forces. The weight of the foundation concrete extending below soil grade may be disregarded in sizing computations.

We recommend that all foundations be reinforced to provide structural continuity, mitigate cracking and permit spanning of local soil irregularities. The project Structural Engineer should determine final foundation reinforcing requirements.

Resistance to lateral displacement of shallow foundations may be computed using an allowable friction factor of 0.25 multiplied by the effective vertical load on each foundation. Additional lateral resistance may be achieved using an allowable passive earth pressure against the vertical projection of the foundation equal to an equivalent fluid pressure of 250 psf per foot of depth. These two modes of resistance should not be added unless the passive earth pressure component is reduced by 50 percent. The uppermost one foot of passive resistance should be ignored in design if the area in front of footing is not paved or covered with concrete flatwork.

Interior Floor Slab Support

The interior concrete slab-on-grade floors for the residential buildings should be at least four inches thick and can be supported upon the soils prepared in accordance with the recommendations in this report, maintained in that condition and protected from disturbance. We recommend that interior floor slabs be reinforced to provide structural continuity, mitigate cracking and permit spanning of local soil irregularities. The project Structural Engineer should determine final floor slab reinforcing requirements. Proper and consistent location of the reinforcement at mid-slab is essential to its performance. The risk of uncontrolled shrinkage cracking is increased if the reinforcement is not properly located within the slab. Temporary loads exerted during construction from vehicle traffic, construction equipment, storage of palletized construction materials, etc., should be considered in the design of the thickness and reinforcement of the interior slab.

Floor slabs may be underlain by a layer of free-draining crushed rock, serving as a deterrent to migration of capillary moisture. The crushed rock layer should be between four and six inches thick and graded such that 100 percent passes a one-inch sieve and less than five percent passes a No. 4 sieve. Additional moisture protection may be provided by placing a plastic water vapor retarder membrane (at least 10 mils thick or thicker) directly over the crushed rock. The water vapor retarder membrane should meet or exceed the minimum specifications as outlined in ASTM E1745 and installed in strict conformance with the manufacturer's recommendations.

It is our opinion that the vapor retarder membrane is not required beneath residential interior garage slabs, provided these areas are not intended for living spaces, to be covered with moisture-sensitive floor coverings, or storage of materials that require protection against moisture or moisture vapor penetration. We suggest that future homeowners be notified that the interior garage areas are not intended for living spaces, if the vapor retarder membrane is not used.

Floor slab construction over the past 30 years or more has included placement of a thin layer of sand or pea gravel over the vapor retarder membrane. The intent of the sand/pea gravel is to aid in the proper curing of the slab concrete and to protect the membrane prior to concrete placement. However, recent debate over excessive moisture vapor emissions from floor slabs includes concern for water trapped within the sand/pea gravel. As a consequence, we consider the use of the sand/pea gravel layer as optional. The concrete curing benefits should be weighed against efforts to reduce slab moisture vapor transmission.

The recommendations presented above are intended to mitigate any significant soils-related cracking of the slab-on-grade floors. More important to the performance and appearance of a

Portland cement concrete slab is the quality of the concrete, the workmanship of the concrete contractor, the curing techniques utilized and the spacing of control joints.

Floor Slab Moisture Penetration Resistance

It is considered likely that interior floor slab subgrade soils will become wet to near-saturated at some time during the life of the structures. This is a certainty when slabs are constructed during the wet season or when constantly wet ground or poor drainage conditions exist adjacent to structures. For this reason, it should be assumed that all slabs in living areas, as well as those intended for moisture-sensitive floor coverings or materials, require protection against moisture or moisture vapor penetration, or mold formation. Standard practice includes the crushed rock and water vapor retarder as suggested above. However, the crushed rock and membrane offer only a limited, first-line of defense against soil-related moisture. Recommendations contained in this report concerning foundation and floor slab design are presented as *minimum* requirements, and only from the geotechnical engineering standpoint.

It is emphasized that the use of sub-slab crushed rock and vapor retarder membrane will not "moisture proof" the slab, nor does it assure that slab moisture transmission levels will be low enough to prevent damage to floor coverings or other building components, or mold formation. If increased protection against moisture vapor penetration of slabs is desired, a concrete moisture protection specialist should be consulted. The design team should consider all available measures for slab moisture protection. It is commonly accepted that maintaining the lowest practical water-cement ratio in the slab concrete is one of the most effective ways to reduce future moisture vapor penetration of the completed slabs.

Exterior Flatwork

Soil subgrade areas to support exterior concrete flatwork (i.e., sidewalks, patios, etc.) should be prepared in accordance with the recommendations presented in the Site Preparation and Engineered Fill Construction section of this report. Proper moisture conditioning of the subgrade soils is considered essential to the performance of the exterior flatwork. Areas to receive exterior concrete flatwork (i.e., driveways, sidewalks, patios, etc.) should be brought to an over-optimum condition and uniformly compacted, prior to the placement of the concrete. A six-inch layer of aggregate base should be used as a leveling course beneath the exterior flatwork and compacted to not less than 95 percent relative compaction (ASTM D1557).

Exterior flatwork concrete in non-pavement areas should be at least four inches thick. Consideration should be given to thickening the slabs to at least five inches thick where wheel traffic is expected over the slabs. Expansion joints should be provided to allow for minor vertical

movement of the flatwork. Exterior flatwork should be constructed independent of perimeter building foundations and isolated column foundations by the placement of a layer of felt material between the flatwork and the foundation. The slab designer should determine the final thickness, strength and joint spacing of exterior slab-on-grade concrete. The slab designer should also determine if slab reinforcement for crack control is required and determine final slab reinforcing requirements.

Areas adjacent to new exterior flatwork should be landscaped to maintain more uniform soil moisture conditions adjacent to and beneath flatwork. We recommend final landscaping plans not allow fallow ground adjacent to exterior concrete flatwork.

The soils in Elk Grove are potentially expansive. The soils swell when the moisture content increases and shrink when the soil moisture content decreases. It is essential that the soil moisture content under and near the foundations and exterior concrete flatwork remain at a relatively constant moisture content to mitigate the potential for heaving or settling of the foundation and slabs.

Practices recommended by the Portland Cement Association (PCA) for proper placement, curing, joint depth and spacing, construction, and placement of concrete should be followed during exterior concrete flatwork construction.

Drought Considerations

The State of California can experience extended periods of severe drought. The ability for homeowners to use irrigation as a means for maintaining landscape vegetation and soil moisture may be inhibited for unpredictable periods of time. For this reason, landscape and hardscape systems for this development should be carefully planned to prevent the desiccation of soils under and near foundations and slabs. Trees with invasive shallow root systems should be avoided. No trees or large shrubs that could remove soil moisture during dry periods should be planted within five feet of any foundation or slab. Fallow ground adjacent to foundations must be avoided.

To reduce potential for loss of lateral support adversely affecting residential foundations or exterior flatwork, we recommend a minimum horizontal distance of five feet be provided and maintained between the outside edge of the foundation or flatwork to the nearest adjacent slope (e.g. building pad hinge point), for slopes greater than two feet in height.

Retaining Walls

Retaining walls that are essentially fixed at the top (unable to rotate about their bases) should be capable of resisting "active" lateral soil pressures equal to an equivalent fluid pressure of 45 psf per foot of retained soil. Rigid or restrained retaining walls that are not allowed to yield at the top should be capable of resisting "at-rest" lateral soil pressures equal to an equivalent fluid pressure of 65 psf per foot of retained soil. These soil pressures assume a horizontal grade behind the walls and that the walls will be fully drained so that hydrostatic pressures will not develop behind the walls. Walls supporting sloping backfill, up to a two horizontal to one vertical (2H:1V) inclination, should be designed adding an additional 20 psf per foot of wall to the pressures presented above.

Retaining wall foundations may be designed in accordance with the criteria contained in the Foundation Design section of this report. Resistance to lateral foundation displacement for retaining walls and sound wall systems may be computed using the values provided in the Foundation Design section of this report, only if the bottom of the foundation is at least five feet horizontally from the face of any fill slope. We can evaluate the reduced passive pressure on a case-by-case basis, upon request. In no case should the bottom of retaining wall foundations be within three feet of the face of any slope. The upper twelve inches of embedment should be disregarded for lateral support calculations, due to the expansive soil conditions.

Retaining walls should be fully drained to prevent the build-up of hydrostatic forces behind the wall. Drainage may be accomplished by the use of weep holes or perforated rigid pipe placed near the base of the wall and sloped to a discharge point at a gradient of at least one percent. The perforated pipe should be completely surrounded by a drainage blanket composed of State of California Class 2 permeable material (*Caltrans Standard Specifications*, Section 68-2.02.F). The drainage blanket should be at least one foot in width and should extend to within one foot of the top of the wall. The upper foot of wall backfill should be composed of compacted native soils. Alternatively, ½- to ¾-inch open-graded crushed rock may be used in place of the Class 2 permeable drain rock, provided that the rock and the perforated pipe are completely enveloped in a nonwoven geotextile fabric that is approved by the Geotechnical Engineer.

Structural backfill materials for retaining walls (other than the drainage layer) should be granular soils and not contain significant quantities of rubbish, rubble and organics; clay soils should not be used for wall backfill. Structural backfill should be placed in level lifts not exceeding 12 inches in compacted thickness, and should be mechanically compacted to not less than 90 percent relative compaction, based on ASTM D1557. Over-compacting wall backfill should be avoided. Backfilling should not begin until the wall concrete has reached a minimum strength as determined by the project Structural Engineer.

Sound Wall Systems

Sound wall foundations may be designed in accordance with the criteria contained in the Foundation Design section of this report. Resistance to lateral foundation displacement for sound wall systems may be computed using the values provided in the Foundation Design section of this report, only if the bottom of the foundation is at least five feet horizontally from the face of any fill slope. If this distance cannot be achieved or maintained, we can provide additional evaluation on a case-by-case basis, as needed.

As an alternative, sound walls can also be supported on drilled piers. Drilled piers for sound walls should be at least 12 inches in diameter and extend at least five feet below the ground surface may be sized utilizing a maximum allowable vertical bearing capacity of 4,500 psf or an allowable skin friction of 300 psf for dead plus live loads, which may be applied over the surface of the pier. The upper 12 inches of skin friction should be disregarded unless the pier is completely surrounded by concrete or pavements for a distance of at least three feet from the edge of the foundation pier. These values may be increased by one-third to include the short-term wind or seismic forces. The weight of foundation concrete below grade may be disregarded in sizing computations for the end-bearing conditions.

Uplift resistance of pier foundations may be computed using the following resisting forces, where applicable: 1) effective weight of the pier concrete, and 2) the allowable skin friction of 180 psf applied over the shaft area of the pier. The upper 12 inches of embedment should be neglected due to the presence of expansive clays. Increased uplift resistance can be achieved by increasing the diameter of the pier or increasing the depth.

Lateral resistance of pier foundations may be evaluated by applying a passive earth pressure of equivalent to a fluid pressure of 250 psf per foot of depth applied over 1½-pier diameters times the depth of the pier.

Site Drainage

Final site grading should be accomplished to provide positive drainage of surface water away from structures and prevent ponding of water adjacent to foundations, slabs or pavements. The grade adjacent to houses should be sloped away from foundations at a minimum two percent slope for a distance of at least five feet, where possible. Roof gutter downspouts and surface drains should drain onto flatwork or be connected to rigid non-perforated piping directed to an appropriate drainage point away from the houses. Ponding of surface water should not be allowed adjacent to the buildings or pavements. Landscape berms, if planned, should not be constructed in such a manner as to promote drainage toward structures.

Pavement Design

Laboratory testing of the anticipated pavement subgrade soils indicates these materials exhibit poor to good subgrade qualities for support of asphalt concrete pavements. Laboratory testing of two selected soil samples indicates the samples tested possess Resistance ("R") values of 5 and 51 (see Figure A4). Based on the R-value test results and our experience in the area, we have selected an R-value of five for the calculation of alternate asphalt pavement sections presented below. Table 3 summarizes pavement sections that have been calculated based on the City of Elk Grove Traffic Indices for various street right-of-ways, a design R-value of five; and, the procedures contained within Chapters 600 to 670 of the California Highway Design Manual, 7th Edition. A copy of our pavement design calculations package is provided in Appendix C.

According to the City of Elk Grove May 11, 2020 Improvement Standards, “Primary Residential” streets servicing between 100 and 400 residential units should be designed for a minimum Traffic Index of six, with minimum structural sections of four inches of asphalt concrete over 13 inches of aggregate base. “Collector” streets should be designed for a minimum Traffic Index of seven, with minimum structural sections of four inches of asphalt concrete over 16 inches of aggregate base. The gravel equivalent safety factor of 0.2 feet of asphalt concrete should be used for design.

TABLE 3
PAVEMENT DESIGN ALTERNATIVES

Traffic Index (TI)	Traffic Condition/Street Classification	Pavement Subgrade R-value = 5	
		Type A Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
6.0	Primary Residential (servicing between 100 and 400 residential units)	4*	13**
7.0	Collector (for residential, multi-family, commercial and industrial)	4*	16**

* = Minimum thickness per City of Elk Grove Standards, asphalt concrete thickness includes the Caltrans Safety Factor
** = Minimum thickness per City of Elk Grove Standards

The City of Elk Grove requires the use of a geotextile fabric conforming to AASHTO M228-96 Geotextile Specification for Class 1 geotextiles be placed between the basement soil and the aggregate base material. For pavement subgrades with an R-value of 30 or less, installation of pavement edge drains at least 12 inches deep also are required on both sides of the streets and are to be located at the back of curb on all pavement subgrades.

We emphasize that the performance of pavements is critically dependent upon uniform and adequate compaction of the soil subgrade, as well as all engineered fill and utility trench backfill within the limits of the pavements. We recommend that pavement subgrade preparation, i.e. scarification, moisture conditioning and compaction, be performed after underground utility construction is completed and just prior to aggregate base placement. The upper six inches of pavement subgrade soils should be compacted to at least 95 percent relative compaction at no less than the optimum moisture content (ASTM D1557). Pavement subgrades should be proof-rolled with a fully-loaded, water truck prior to placement of aggregate base to identify soft/unstable areas that may require removal and re-compaction. All aggregate base should be compacted to at least 95 percent of the maximum dry density (ASTM D1557). Placement of aggregate base upon completed pavement subgrades should be accomplished within 72 hours to prohibit significant drying of the subgrade soils. Materials quality and construction of the structural section should conform to the applicable provisions of the *Caltrans Standard Specifications* and the City of Elk Grove Standards, latest editions.

Pavement Drainage

Efficient drainage of all surface water to avoid infiltration and saturation of the supporting aggregate base and subgrade soils is important to pavement performance. Weep holes could be provided at drainage inlets, located at the subgrade/base interface, to allow accumulated water to drain from beneath the pavements.

Geotechnical Engineering Observation and Testing During Earthwork

Site preparation should be accomplished in accordance with the recommendations of this report. Geotechnical testing and observation during construction is considered a continuation of our geotechnical engineering study. Wallace-Kuhl & Associates should be retained to provide testing and observation services during site preparation, earthwork, and foundation construction at the project to verify compliance with this geotechnical report and the project plans and specifications and to provide consultation as required during construction. These services are beyond the scope of work authorized for this study. We would be pleased to submit a proposal to provide these services upon request.

Section 1803.5.8 “Compacted Fill Material” of the 2019 CBC requires that the geotechnical engineering report provide a number and frequency of field compaction tests to determine compliance with the recommended minimum compaction. Many factors can affect the number of tests that should be performed during the course of construction, such as soil type, soil moisture, season of the year and contractor operations/performance. Therefore, it is crucial that the actual number and frequency of testing be determined by the Geotechnical Engineer during construction based on their observations, site conditions, and difficulties encountered.

In the event that Wallace-Kuhl & Associates is not retained to provide geotechnical engineering observation and testing services during construction, the Geotechnical Engineer retained to provide these services should indicate in writing that they agree with the recommendations of this report, or prepare supplemental recommendations as necessary. A final report by the “Geotechnical Engineer” should be prepared upon completion of the project.

Future Services

We recommend that Wallace-Kuhl & Associates be retained to review the final plans and specifications to determine if the intent of our recommendations has been implemented in those documents. We would be pleased to submit a proposal to provide these services upon request.

LIMITATIONS

Our recommendations are based upon the information provided regarding the proposed project, combined with our analysis of site conditions revealed by the field exploration and laboratory testing programs. We have used our engineering judgment based upon the information provided and the data generated from our study. This report has been prepared in substantial compliance with generally accepted geotechnical engineering practices that exist in the area of the project at the time the report was prepared. No warranty, either express or implied, is provided.

If the proposed construction is modified or relocated; or, if it is found during construction that subsurface conditions differ from those we encountered at the test pit locations, we should be afforded the opportunity to review the new information or changed conditions to determine if our conclusions and recommendations must be modified.

We emphasize that this report is applicable only to the proposed construction and the studied site. This report should not be utilized for construction on any other site. This report is considered valid for the proposed construction for a period of two years following the date of this report. If construction has not started within two years, we must re-evaluate the recommendations of this report and update the report, if necessary.

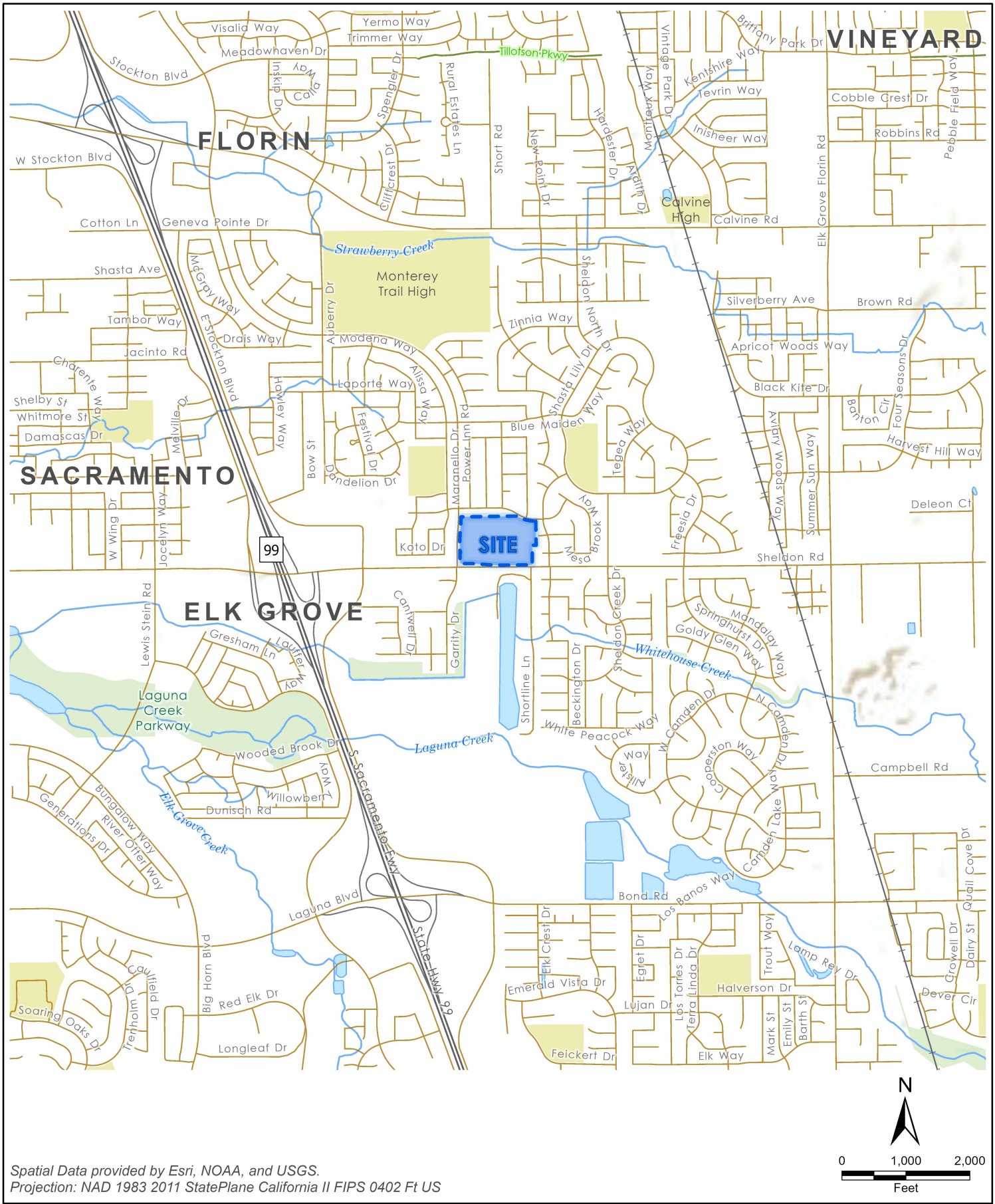
Wallace - Kuhl & Associates



Kylie Lim
Staff Engineer

Edward Mak
Senior Engineer

APPENDICES



Spatial Data provided by Esri, NOAA, and USGS.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

WallaceKuhl & ASSOCIATES

VICINITY MAP

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	1
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02



Approximate Test Pit Location

Approximate Bulk Soil Sample Location

Aproximate Site Boundary

N

0 100 200

Feet

Aerial imagery provided by Esri.
Site Plan adapted from a drawing provided by Andrea Mayer Consulting Planning + Design, dated March 18, 2020.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

WallaceKuhl & ASSOCIATES

SITE PLAN

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	2
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP1

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**5.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Brown, moist, silty SAND (SM) with clay		TP1-1 TP1(0'-3')				
	5		Test pit terminated at about 5 feet below site grade due to practical refusal. Groundwater was not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 3

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP2

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**10.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Brown to dark brown, moist, slightly sandy, silty CLAY (CL) with gravel at the surface		TP2(0'-'3') TP2-1		13.0		EI=79 PI=25 GR CR
			dark brown						
	5		Light brown, moist, clayey SILT (ML) with sand		TP2(5'-7')				
	10		Test pit terminated at about 10 feet below site grade. Groundwater not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 4

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP3

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**10.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Brown, moist, silty SAND (SM) trace clay		TP3(0'-2')				
			Brown, moist, silty CLAY (CL)						
	5		Light brown, moist, clayey SILT (ML) with sand		TP3(3'-5') TP3-1		15.7		
	10		Test pit terminated at about 10 feet below site grade. Groundwater not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 5

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP4

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**10.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Brown, moist, sandy clayey SILT (ML)		TP4(0'-3')				EI=36 PI=11 GR
			Dark brown, moist, silty CLAY (CL)		TP4-1		12.7	107	UCC= 3.26 tsf
					TP4(3'-5')				
	5		Light brown, moist, clayey silty variably cemented SAND (SM)						
	10		Test pit terminated at about 10 feet below site grade. Groundwater not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 6

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP5

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**10.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Brown, moist, silty CLAY (CL) trace sand		TP5(0'-3')				
			dark brown, no sand						
			Light brown, moist, clayey silty variably cemented SAND (SM)						
	5				TP5-1				
	10		Test pit terminated at about 10 feet below site grade. Groundwater not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 7

Project: Sheldon Grove Subdivision
Project Location: Elk Grove, California
WKA Number: 12865.02

LOG OF TEST PIT TP6

Sheet 1 of 1

Date(s) Drilled	**8/10/20**	Logged By	**JRY**	Checked By	**EM**
Drilling Method	**Backhoe**	Drilling Contractor	**Ron Tilford Backhoe**	Total Depth of Drill Hole	**10.0 feet**
Drill Rig Type	**Case 580M**	Diameter(s) of Hole, inches	**24"**	Approx. Surface Elevation, ft MSL	
Groundwater Depth [Elevation], feet	**Not Encountered**	Sampling Method(s)	**2.0" Modified California with 6-inch sleeve**	Drill Hole Backfill	**Soil Spoils**
Remarks				Driving Method and Drop	**Slide Hammer**

ELEVATION, feet	DEPTH, feet	GRAPHIC LOG	ENGINEERING CLASSIFICATION AND DESCRIPTION	SAMPLE DATA: SAMPLE	SAMPLE NUMBER	NUMBER OF BLOWS	TEST DATA: MOISTURE CONTENT, %	DRY UNIT WEIGHT, pcf	ADDITIONAL TESTS
			Light brown, moist, silty CLAY (CL) with gravel at surface		TP6(0'-3')				
			dark brown						
			Light brown, moist, clayey sandy variably cemented SILT (ML)						
	5				TP6-1				GR
	10		Test pit terminated at about 10 feet below site grade. Groundwater not encountered.						

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Wallace Kuhl & ASSOCIATES

FIGURE 8

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487)

MAJOR DIVISIONS		USCS[4]	CODE	CHARACTERISTICS
COARSE GRAINED SOILS (More than 50% of soil > no. 200 sieve size)	GRAVELS[1] (More than 50% of coarse fraction > no. 4 sieve size)	GW		Well-graded gravels or gravel - sand mixtures, trace or no fines
		GP		Poorly graded gravels or gravel - sand mixtures, trace or no fines
		GM		Silty gravels, gravel - sand - silt mixtures, containing little to some fines[2]
		GC		Clayey gravels, gravel - sand - clay mixtures, containing little to some fines[2]
	SANDS[1] (50% or more of coarse fraction < no. 4 sieve size)	SW		Well-graded sands or sand - gravel mixtures, trace or no fines
		SP		Poorly graded sands or sand - gravel mixtures, trace or no fines
		SM		Silty sands, sand - gravel - silt mixtures, containing little to some fines[2]
		SC		Clayey sands, sand - gravel - clay mixtures, containing little to some fines[2]
FINE GRAINED SOILS (50% or more of soil < no. 200 sieve size)	SILTS & CLAYS LL < 50	ML		Inorganic silts, gravely silts, and sandy silts that are non-plastic or with low plasticity
		CL		Inorganic lean clays, gravelly lean clays, sandy lean clays of low to medium plasticity[3]
		OL		Organic silts, organic lean clays, and organic silty clays
	SILTS & CLAYS LL ≥ 50	MH		Inorganic elastic silts, gravelly elastic silts, and sandy elastic silts
		CH		Inorganic fat clays, gravelly fat clays, sandy fat clays of medium to high plasticity
		OH		Organic fat clays, gravelly fat clays, sandy fat clays of medium to high plasticity
HIGHLY ORGANIC SOILS		PT		Peat
ROCK		RX		Rocks, weathered to fresh
FILL		FILL		Artificially placed fill material

OTHER SYMBOLS

= Drive Sample: 2-1/2" O.D. Modified California sampler

= Drive Sampler: no recovery

= SPT Sampler

= Initial Water Level

= Final Water Level

— — — = Estimated or gradational material change line

——— = Observed material change line

Laboratory Tests

CR = Corrosion
PI = Plasticity Index
EI = Expansion Index
UCC = Unconfined Compression Test (TSF)
TR = Triaxial Compression Test
GR = Gradational Analysis (Sieve/Hydro)
FC = Wash (Fines Content)
PP = Pocket Penetrometer Test (TSF)
PID = Photo Ionization Detector Test (PPM)
RV = Resistance ("R") Value

REF = Refusal (>50 blows in 6 inches)

GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS (b)	Above 12"	Above 300
COBBLES (c)	12" to 3"	300 to 75
GRAVEL (g) coarse fine	3" to No. 4 3" to 3/4" 3/4" to No. 4	75 to 4.75 75 to 19 19 to 4.75
SAND coarse medium fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.75 to 0.075 4.75 to 2.00 2.00 to 0.425 0.425 to 0.075
SILT & CLAY	Below No. 200	Below 0.075

Trace - Less than 5 percent
Few - 5 to 10 percent
Little - 15 to 25 percent
Some - 35 to 45 percent
Mostly - 50 to 100 percent

* Percents as given in ASTM D2488

NOTES:

1. Coarse grained soils containing 5% to 12% fines, use dual classification symbol (ex. SP-SM).
2. If fines classify as CL-ML (4<PI<7), use dual symbol (ex. SC-SM).
3. Silty Clays, use dual symbol (CL-ML).
4. Borderline soils with uncertain classification list both classifications (ex. CL/ML).

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UNIFIED SOIL CLASSIFICATION SYSTEM

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	9
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02

APPENDIX A

General Project Information, Laboratory Testing and Results

APPENDIX A

A. GENERAL INFORMATION

The performance of a geotechnical engineering study for the proposed Sheldon Grove subdivision to be located northeasterly of the intersection of Sheldon Road and Power Inn Road in Elk Grove, California, was authorized by Mr. Gregg Jones on August 4, 2020. Authorization was for a study as described in our proposal letter dated August 3, 2020, sent to our client Tsakopoulos Management Company, LLC, whose mailing address is 1435 River Park Drive, Suite 500, Sacramento, California 95815-4511; telephone (916) 927-3008.

The project Civil Engineer is Andrea Mayer Consulting Planning + Design, whose mailing address is P.O. Box 2042 in Davis, California 95617; telephone 916-712-7059.

In preparing this report we referenced a Conceptual Plan, dated March 18, 2020, prepared by Andrea Mayer Consulting Planning + Design.

B. FIELD EXPLORATION

Six test pits were excavated on August 10, 2020, utilizing a Case 580M rubber-tire backhoe equipped with a 24-inch-wide bucket. Test pits were excavated to a maximum depth of about ten feet below existing site grades at the approximate locations indicated in Figure 2.

At the test pit locations, bulk samples and drive samples of the near-surface soils were collected. At various intervals, relatively undisturbed soil samples were recovered with a 6-inch-long, 2¼-inch-outside-diameter, 2-inch-inside-diameter sampler driven by a 10-pound, hand-operated slide hammer. The drive samples were retained in 2-inch-diameter by 6-inch-long, thin-walled brass tubes contained within the sampler. Immediately after recovery, the field representative visually classified the soil in the tubes, and the ends of the tubes were sealed to preserve the natural moisture contents. All samples were taken to our laboratory for additional soil classification and selection of samples for testing.

Descriptions of the soils encountered in the test pits are presented in Figures 3 through 8. An explanation of the Unified Soil Classification System and the symbols used in the logs are presented in Figure 9.

At the completion of the test pits, the excavation spoils were used to backfill the excavations in thin lift compacted with a sheepsfoot wheel attachment.

C. LABORATORY TESTING

Selected soil samples were tested to determine the natural moisture content (ASTM D2216). The results of these tests are included on the logs at the depth each tested sample was obtained.

Two representative samples of near-surface cohesive soil were subjected to Atterberg Limits tests (ASTM D4318). The results of these tests are presented in Figure A1.

Two representative samples of the near-surface soil was subjected to Expansion Index testing (ASTM D4829). The results are presented in Figures A2 and A3.

Two bulk samples of near-surface soils were subjected to Resistance-value ("R") testing in accordance with California Test 301. The results of the R-value tests are presented as Figure A4.

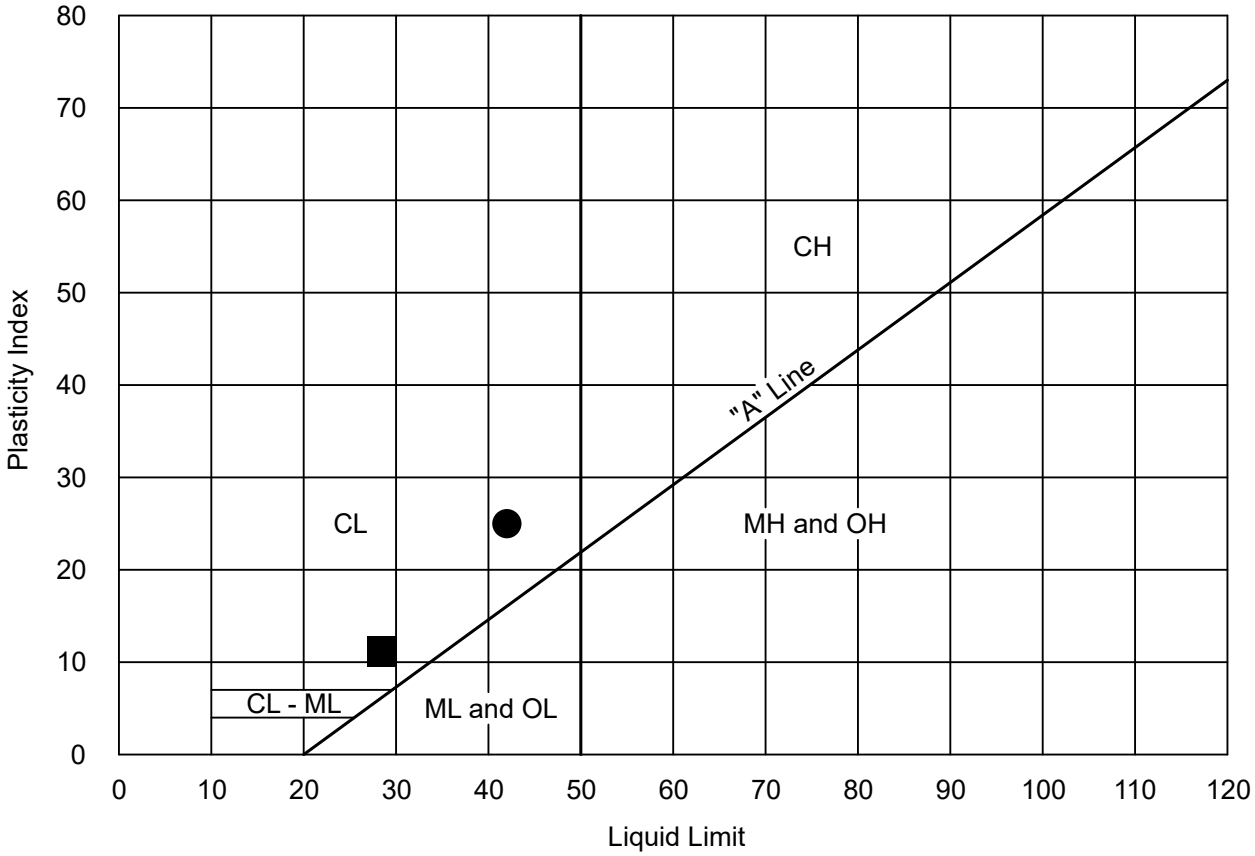
Particle size distribution tests (ASTM D6913) and hydrometer tests (ASTM D7928) were performed on three selected soil samples. The results are presented in Figure A5.

One representative sample of near-surface soil were submitted to Sunland Analytical of Rancho Cordova, California, to determine the soil pH and minimum resistivity (California Test 643), sulfate concentration (California Test 417 and ASTM D516m) and chloride concentration (California Test 422m). The test results are presented in Figures A6 and A7.

/

ATTERBERG LIMITS

ASTM D4318



KEY SYMBOL	LOCATION	SAMPLE DEPTH	NATURAL WATER CONTENT (%)	ATTERBERG LIMITS		PASSING No. 200 SIEVE (%)	UNIFIED SOIL CLASSIFI-CATION SYMBOL
				LIQUID LIMIT (%)	PLASTICITY INDEX (%)		
●	TP2	0'-3'	---	42	25	---	CL
■	TP4	0'-3'	---	28	11	---	CL

Wallace Kuhl & ASSOCIATES

ATTERBERG LIMITS

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A1
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO. 12865.02	

EXPANSION INDEX TEST RESULTS

ASTM D4829

MATERIAL DESCRIPTION: Brown to dark brown, sandy silty clay

LOCATION: TP2

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index
0' - 3'	12.7	28.8	101	**79**

CLASSIFICATION OF EXPANSIVE SOIL *

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	Low
51 - 90	**Medium**
91 - 130	High
Above 130	Very High

* From ASTM D4829, Table 1

Wallace Kuhl & ASSOCIATES

EXPANSION INDEX

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A2
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020

WKA NO. 12865.02

EXPANSION INDEX TEST RESULTS

ASTM D4829

MATERIAL DESCRIPTION: Brown, silty sand

LOCATION: TP4

Sample Depth	Pre-Test Moisture (%)	Post-Test Moisture (%)	Dry Density (pcf)	Expansion Index
0' - 3'	10.1	21.6	107	**36**

CLASSIFICATION OF EXPANSIVE SOIL *

EXPANSION INDEX	POTENTIAL EXPANSION
0 - 20	Very Low
21 - 50	**Low**
51 - 90	Medium
91 - 130	High
Above 130	Very High

* From ASTM D4829, Table 1

Wallace Kuhl & ASSOCIATES

EXPANSION INDEX

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A3
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020

WKA NO. 12865.02

RESISTANCE VALUE TEST RESULTS

(California Test 301)

MATERIAL DESCRIPTION: Tan, clayey silt

LOCATION: B1 (0' - 3')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion (dial, inches x 1000)	Expansion (psf)	R Value
1	110	14.8	204	24	104	50
2	112	13.8	452	22	95	58
3	109	14.2	367	23	100	53

R-Value at 300 psi exudation pressure = **51**

MATERIAL DESCRIPTION: Brown, silt clay

LOCATION: B2 (0' - 3')

Specimen No.	Dry Unit Weight (pcf)	Moisture @ Compaction (%)	Exudation Pressure (psi)	Expansion (dial, inches x 1000)	Expansion (psf)	R Value
1	116	13.9	544	30	130	*

* Sample extruded, therefore R-Value = **5**

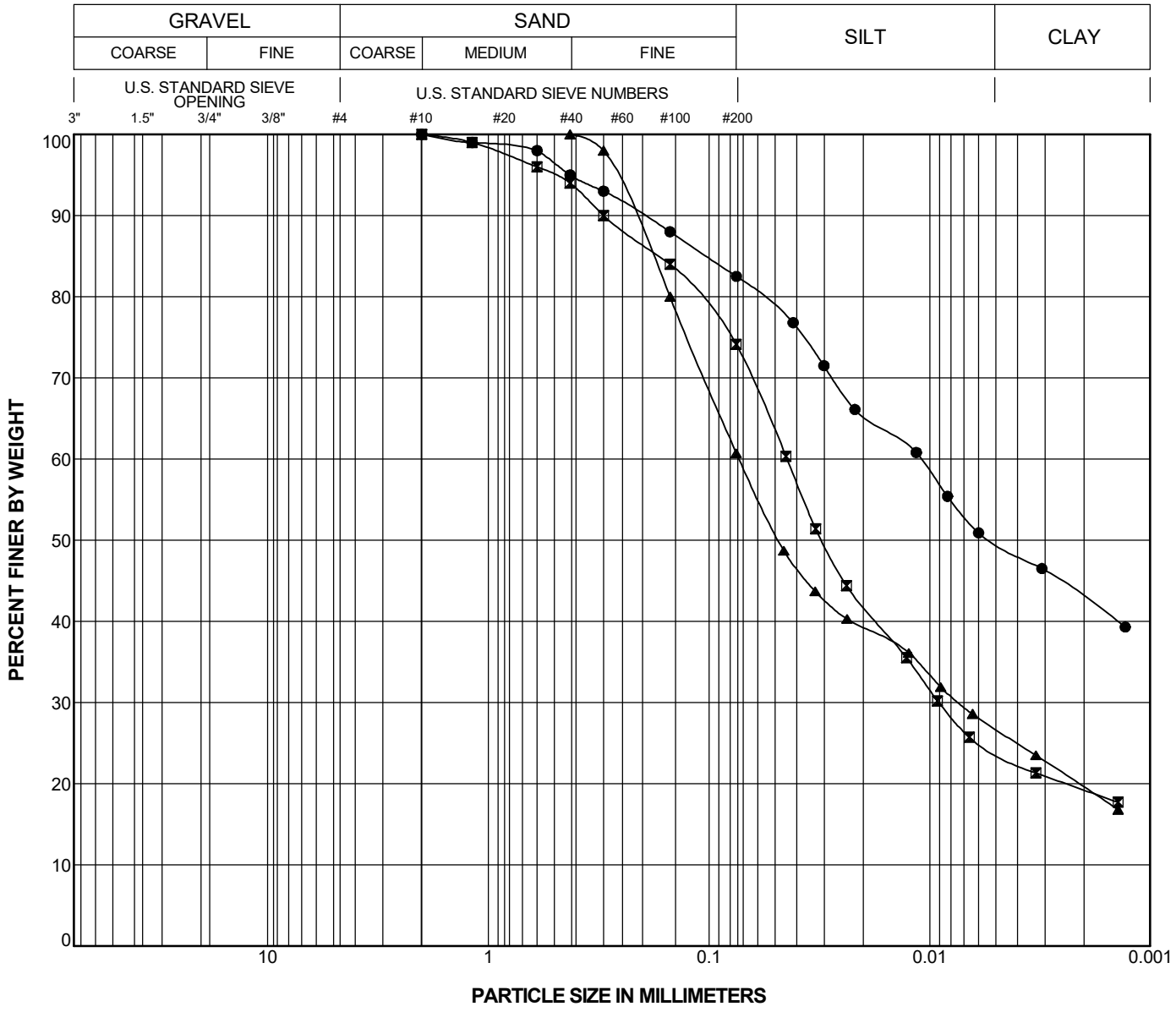
WallaceKuhl & ASSOCIATES

RESISTANCE VALUE TEST RESULTS

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A4
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02



Boring Number	Sample Number	USCS	Depth (feet)	Symbol	LL	PI	Classification
TP2	TP2(0'-3')	CL	0'-3'	●	42	25	Brown to dark brown, slightly sandy, silty clay
TP4	TP4(0'-3')	ML	0'-3'	⊠	28	11	Brown, sandy clayey silt
TP6	TP6(6'-6½')	ML	6'-6½'	▲	--	--	Light brown, clayey sandy silt

PARTICLE SIZE DISTRIBUTION

Project: Sheldon Grove Subdivision
WKA No. 12865.02

FIGURE A5

Wallace Kuhl & ASSOCIATES

GRAIN SIZE 12865.02 - SHELDON GROVE TEST PIT LOGS.GPJ WKA.GDT 9/8/20 10:04 AM

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 08/21/2020
Date Submitted 08/18/2020

To: Kylie Lim
Wallace-Kuhl & Assoc.
3050 Industrial Blvd
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 12865.02 Site ID : TP2@0-3FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 82824-172932.

EVALUATION FOR SOIL CORROSION

Soil pH	6.76		
Minimum Resistivity	2.95	ohm-cm (x1000)	
Chloride	2.7 ppm	00.00027	%
Sulfate	11.0 ppm	00.00110	%

METHODS
pH and Min.Resistivity CA DOT Test #643
Sulfate CA DOT Test #417, Chloride CA DOT Test #422m

WallaceKuhl & ASSOCIATES

CORROSION TEST RESULTS

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A6
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 08/21/2020
Date Submitted 08/18/2020

To: Kylie Lim
Wallace-Kuhl & Assoc.
3050 Industrial Blvd
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 12865.02 Site ID : TP2@0-3FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 82824-172933.

Extractable Sulfate in Water

Type of TEST	Result	Units
Sulfate-SO4	11.2	mg/kg

METHODS
ASTM D-516m from sat.paste extract-reported based on dry wt.

WallaceKuhl & ASSOCIATES

CORROSION TEST RESULTS

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	A7
DRAWN BY	RWO
CHECKED BY	KRL
PROJECT MGR	EM
DATE	09/2020
WKA NO.	12865.02

APPENDIX B
Earthwork Specifications

APPENDIX B

EARTHWORK SPECIFICATIONS

SHELDON GROVE SUBDIVISION

Elk Grove, California

WKA No. 12865.02

GEOTECHNICAL REPORT

A *Geotechnical Engineering Report* (WKA No. 12865.02, dated September 8, 2020), has been prepared for this project by Wallace-Kuhl & Associates of West Sacramento, California; telephone (916) 372-1434; facsimile (916) 372-2565. A copy is available for review at the office of Wallace-Kuhl & Associates, 3050 Industrial Boulevard, West Sacramento, California. The information contained in the *Geotechnical Engineering Report* was obtained for design purposes only.

GENERAL DESCRIPTION

This item shall include all clearing and grubbing, over-excavation and re-compaction operations, preparation of land to be filled, spreading, compaction, observation and testing of the fill, and all subsidiary work necessary to complete the grading of the site to conform with the lines, grades and slopes as shown on the accepted plans.

SEASONAL LIMITS

Fill materials shall not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until field tests indicate that the moisture content and density of the fill are satisfactory.

MATERIALS

On-site soils are considered suitable for use in engineered fill construction in structural areas provided these materials do not contain rubbish, rubble greater than three inches (3”), and significant organic concentrations. Imported fill materials, if required, shall be similar to but less expansive than native soil and does not contain particles greater than three inches (3”) in

maximum dimension. Imported soils shall be approved by the project Geotechnical Engineer prior to being transported to the site. Also, if import fills are required (other than aggregate base), the contractor shall provide appropriate documentation that the import is clean of known contamination and within acceptable corrosion limits.

CLEARING, GRUBBING AND PREPARING BUILDING AND PAVEMENT AREAS

All existing improvements designated for removal shall be demolished and construction areas shall be cleared of surface and subsurface structures (including but not limited to miscellaneous surface trash, rubble, deleterious debris, etc.) associated with previous site development. Demolition debris shall be removed and disposed of so as to leave the areas that have been disturbed with a neat and finished appearance, free from unsightly debris. Water wells and septic systems/tanks shall be properly abandoned in accordance with Sacramento County Environmental Management Department requirements. Trees and shrubs designated to be removed shall include the entire rootball and all roots larger than one-half-inch (½") in diameter. Adequate removal of debris and roots may require laborers and handpicking to clear the subgrade soils to the satisfaction of the Geotechnical Engineer's on-site representative, prior to further site preparation. Depressions resulting from the removal of the above items shall be cleaned out to firm, undisturbed soil and backfilled with suitable materials in accordance with these specifications.

Remaining surface organics shall be removed by stripping. Strippings shall not be used in general fill construction or those fills used to support sound walls, but may be used in landscape areas, provided they are kept at least five feet (5') from the building pads, moisture conditioned and compacted. Discing of organics into the surface soils may be a suitable alternative to stripping, depending upon the quantity and condition of the surface vegetation at the time of grading. Discing will be allowed only with the prior approval of the Geotechnical Engineer's representative. Discing operations shall be observed by the Geotechnical Engineer's representative and must be continuous until organics are adequately mixed with the soil to provide a compactable mixture. Pockets or concentrations of organics will not be allowed.

Following site clearing activities, the disturbed soils and construction areas shall be over-excavated to a depth of at least 12 inches and the exposed soil shall be scarified to a depth of

at least twelve inches, thoroughly moisture-conditioned to at least the optimum moisture content for granular soils, or at least two percent above the optimum moisture content for clay soils, and uniformly compacted to not less than 90 percent of the maximum dry density as determined by ASTM D1557. Subgrade preparation operations shall extend at least five feet beyond the building pads, including adjacent flatwork, and two feet beyond pavement areas, where practical.

Areas designated to receive fill, at-grade areas, or those achieved by excavation, shall be plowed or scarified, to a depth of at least twelve inches (12"), moisture conditioned to at least the optimum moisture content for granular soils, at least two percent (2%) above the optimum moisture content for clay soils, and uniformly compacted to not less than ninety percent (90%) of the maximum dry density as determined by ASTM D1557.

Compaction operations shall be performed in the presence of the Geotechnical Engineer who will evaluate the performance of the materials under compactive load. Unstable soil deposits, as determined by the Geotechnical Engineer, shall be excavated to expose a firm base, and grades restored with engineered fill in accordance with these specifications.

PLACING, SPREADING AND COMPACTING FILL MATERIAL

The selected fill material shall be placed in relatively level layers which, when compacted, shall not exceed six inches (6") in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to promote uniformity of material in each layer.

When the moisture content of the fill material is too high to permit the specified compaction to be attained, the fill material shall be aerated by blading or other methods until the moisture content is satisfactory.

After each layer has been placed, mixed, moisture conditioned and spread evenly, it shall be thoroughly compacted to at least ninety percent (90%) of the maximum dry density as determined by ASTM D1557. Compaction shall be undertaken with equipment capable of achieving the specified density and shall be accomplished while the fill material is at the

required moisture content. Each layer shall be compacted over its entire area until the desired density has been obtained.

FINAL SUBGRADE PREPARATION

The upper twelve inches (12") of all final building pad subgrades shall be uniformly and firmly compacted to at least ninety percent (90%) of the ASTM D1557 maximum dry density at a moisture content of at least two percent over the optimum moisture content, maintained in that condition and protected from disturbance, regardless of whether final grade is completed by excavation, filling, or left at existing grade.

The upper six inches (6") of final pavement subgrades shall be uniformly moisture conditioned to at least the optimum moisture content and uniformly compacted to at least ninety-five percent (95%) of the maximum dry density, regardless of whether final grade is completed by excavation, filling, or left at-grade.

FIELD DENSITY TESTS

Field density tests shall be made by the Geotechnical Engineer or the Geotechnical Engineer's representative after compaction of each layer of fill. Where compaction equipment has disturbed the surface to a depth of several inches, density tests shall be taken in the compacted material below the disturbed surface. Additional layers of the fill shall not be spread until the field density tests indicate that the specified density has been obtained.

TESTING

Observation and testing by the Geotechnical Engineer or their representative shall be provided during all filling and compacting operations. The grading contractor shall give at least twenty-four (24) hours notice prior to beginning such operations to allow proper scheduling of the work.

APPENDIX C
Pavement Design Calculations

- For T.I. = 6.0, untreated subgrade (R=5)
  - Determine Gravel Equivalency, GEreq.

    $0.0032\,(6.0)\,(100-5) = 1.824'$

  - AC Thickness:

    $$\frac{[0.0032(6.0)(100-78)(12)]+2.4}{2.32} = 3.22" \rightarrow 4"\ AC \quad (4"\ min)$$

  - AB Thickness:

    $$\left[GE_{req} - \frac{(AC)(GF_{AC})}{12"/1'}\right]\frac{12"/1'}{GF_{AB}} = \left[1.824' - \left(\frac{(4")(2.32)}{12}\right)\right]\frac{12}{1.1}$$

    $$= 11.46" \rightarrow 13"\ AB \quad (13"\ min)$$

- For T.I. = 7.0, untreated subgrade (R=5)
  - Determine Gravel Equivalency, GEreq

    $0.0032(7.0)(100-5) = 2.128'$

  - AC Thickness:

    $$\frac{[0.0032\,(7.0)\,(100-78)\,(12)]+2.4}{2.14} = 3.88" \rightarrow 4"\ AC \quad (4"\ min)$$

  - AB Thickness:

    $$\left[2.128' - \left(\frac{(4")(2.14)}{12}\right)\right]\frac{12}{1.1} = 15.43" \rightarrow 16"\ AB \quad (16"\ min)$$

APPENDIX E

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Phase I Environmental Site Assessment

SHELDON GROVE SUBDIVISION

Power Inn Road and Sheldon Road
Elk Grove, California
WKA No. 12865.01
August 12, 2020

Prepared for:

Angelo G. Tsakopoulos, Angelo G. Tsakopoulos
2012 Irrevocable Family Trust
1435 River Park Drive, Suite 500
Sacramento, California 95815-4511

Wallace Kuhl & Associates

Corporate Office
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209.234.7727 fax

Phase I Environmental Site Assessment

SHELDON GROVE SUBDIVISION

Power Inn Road and Sheldon Road
Elk Grove, California
WKA No. 12865.01
August 12, 2020

Wallace-Kuhl & Associates (WKA), on behalf of Angelo G. Tsakopoulos, Angelo G. Tsakopoulos 2012 Irrevocable Family Trust, prepared this Phase I Environmental Site Assessment for the Sheldon Grove Subdivision located to the northeast of the intersection of Power Inn Road and Sheldon Road in Elk Grove, 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

PROFESSIONAL GEOLOGIST
DENNIS B. NAKAMOTO
No. HG280
CERTIFIED HYDRO GEOLOGIST
STATE OF CALIFORNIA

Nancy M. Malaret
Project Environmental Scientist

Dennis B. Nakamoto, P.G., C.E.G., C.HG.
Senior Hydrogeologist

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B ASTM E 1527-13 User Questionnaire and Helpful Documents Checklist
C Supporting Documents*
C EDR® Radius Map Report with GeoCheck
D Preliminary Screen for Vapor Encroachment Conditions Matrix

*Supporting Documents Appendix contains: Custom Soil Resource Report, EDR® Reports: Sanborn Map Search, Historical Topographic Maps, Aerial Photographic Decade Package, and City Directory Report; and FEMA Flood Map.

EXECUTIVE SUMMARY

The purpose of this Phase I Environmental Site Assessment (ESA) was to assess the Sheldon Grove Subdivision (herein referred to as Site) for evidence of Recognized Environmental Conditions (RECs) resulting from current and/or former Site activities. The Site is located to the northeast of the intersection of Power Inn Road and Sheldon Road in Elk Grove, California (Figures 1, 2, 3, and 4) and is comprised of 19.81 acres of vacant land. The Site is identified by Sacramento County Assessor's Parcel Number (APN): 115-0150-042 (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 late 1800s revealed that the Site has been vacant, grass-covered land since at least 1894.
- 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 1527-13 for the Sheldon Grove Subdivision. 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 Sheldon Grove Subdivision (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 1527-13 (ASTM, 2013).

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 1527-13 and the scope and limitations defined in Wallace-Kuhl & Associates (WKA) proposal, 3PR20124, dated August 4, 2020.

1.2 Scope of Services

WKA has completed this ESA for the Site shown on Figures 1 through 4. Mr. Gregg Jones with Tsakopoulos Management Company, LLC authorized WKA to proceed with this assessment on August 4, 2020, through a signed WKA Environmental Site Assessment Consulting Agreement.

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 1527-13 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.

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. Tsakopoulos Management Company, LLC did not authorize WKA to conduct a search for environmental liens and AULs.

1.4 User Provided Information

WKA provided Tsakopoulos Management Company, LLC a copy of the User Questionnaire and the Helpful Documents checklist. Mr. Gregg Jones, Tsakopoulos Management Company, LLC, 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. Jones was not aware of any records of environmental liens or AULs currently recorded against the Site. Mr. Jones stated he does not possess specialized knowledge or experience related to the Site. Mr. Jones stated that he is not aware of any obvious indicators that point to the presence or likely presence of contamination at the Site.

Mr. Jones was aware of existing "Helpful Documents" as defined in Section 10.8.1 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 to the northeast of the intersection of Power Inn Road and Sheldon Road in Elk Grove, California (Figures 1 and 2). The Site is comprised of Sacramento County Assessor's Parcel Number (APN): 115-0150-042, totaling 19.81 acres of vacant land (Figure 3). Surrounding land use consisted of residences (Figure 4).

2.2 Site Reconnaissance

A visual site reconnaissance was conducted by WKA on August 10, 2020. Figure 5 provides color photographs of the Site taken during the site reconnaissance.

On the day of site reconnaissance, the Site was vacant land. The Site had recently been disced for fire suppression purposes. WKA observed miscellaneous household debris including, but not limited to, clothing, chairs, and plastic totes, along the northern property boundary. WKA observed a power pole on the southeastern portion of the Site, which had an electrical box that had been gutted. The power pole was for a construction trailer that had been present on the Site during the construction of homes to the north and west.

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 Florin Resource Conservation District provides potable water service to the Site vicinity. The Sacramento Area Sewer District provides sanitary sewer service to the Site vicinity.

2.3 Adjoining Properties

The Site is bounded to the north by a residences and Vista Brook Drive. Residences and a fire station are located to the east of the Site. Sheldon Road followed by rural residences and a senior living community is located south of the Site. The Site is bounded to the west by Power Inn Road 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

Mr. Gregg Jones, Tsakopoulos Investments, responded to a questionnaire regarding the Site. Mr. Jones stated that Site is owned by Angelo G. Tsakopoulos, Angelo G. Tsakopoulos Irrevocable Trust. According to Mr. Jones, the Site has been in the Tsakopoulos family since the late 1960s. He stated that the Site was historically used for cattle grazing. He is not aware of any structures having been located at the property. However, a construction trailer was located on the southeastern portion of the Site and a power pole with electrical box remains on the Site. Mr. Jones stated that no soil has been imported to the Site. He is not aware of any aboveground or underground storage tanks having been located at the Site. Mr. Jones 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.

3.3 Past Owners, Operators, and/or Occupants

No information regarding past owners, operators, and/or occupants was received by WKA during 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.

The State Water Resources Control Board (SWRCB) publishes their 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.

The Department of Toxic Substances Control (DTSC) publishes their 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.

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 1980 United States Geological Survey (USGS) 7.5 Minute topographic map of the *Florin, California Quadrangle* as undeveloped land. The Site is located within Sections 23 and 24, Township 7 North, Range 5 East, Mount Diablo Base and Meridian, at an elevation of approximately +30 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 USGS *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, 2020a).

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 silt loam, leveled, 0 to 1 percent slopes; Madera-Galt complex, 0 to 2 percent slopes; and, San Joaquin-Galt complex, leveled, 0 to 1 percent slopes (USDA, 2020). 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 currently monitored groundwater wells within one-half mile of the Site (DWR, 2020).

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, 2020).

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®, 2020a).

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, 1941, 1947, 1968, 1975, 1979/1980, and 2012 were available for review (EDR®, 2020c). 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: Sheldon Road is depicted followed by vacant land. West: Vacant land.
1909	1:31,680	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: A trail road and structure are depicted to the south of Sheldon Road. West: No significant changes noted.
1941	1:62,500	Site: No significant changes noted. North: No significant changes noted. East: A structure is depicted. South: No significant changes noted. West: A structure is depicted.
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	Individual structures are no longer depicted on properties in the vicinity of the Site. Existing subdivision roads are depicted to the north, east, southeast, southwest, and west of the Site. Power Inn Road is depicted adjacent to the west of the Site.

4.2.3 Oil and Gas Well Maps

Review of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website showed that the Site is not located in a designated natural gas field. No DOGGR wells are located on or within at least one mile of the Site (DOGGR, 2020).

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, 2006, 2009, 2012, and 2016 were available for review (EDR®, 2020d). Copies of the aerial photographs

compiled by EDR® with coverage of the Site are included in Appendix C. Table 2 notes the changes on the property and in the vicinity.

Table 2

Year	Scale	Observations
August 1937	1" = 500'	Site: Grass-covered land. North: Ground markings indicating dry farm crop cultivation. East: A rural residence is visible. South: Sheldon Road followed by grass-covered land and irrigated pastures. West: A farmstead is visible.
July 1947	1" = 500'	No significant changes noted for the Site or the vicinity.
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: A structure is visible to the south of Sheldon Road. West: No significant changes noted.
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'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: The existing pond is visible. West: Some of the structures associated with the previously noted farmstead have been removed.
May 1993	1" = 500'	Site: Fallow land. North: Fallow land. East: Subdivision roads are visible to the east of the previously noted rural residence. South: Residences are visible to the east of the previously noted pond. West: All structures have been removed.
2006	1" = 500'	Site: No significant changes noted. North: The existing residences and subdivision roads are visible. East: The existing residences and subdivision roads are visible. South: No significant changes noted. West: Power Inn Road followed by existing residences and subdivision roads is visible.

Table 2		
Year	**Scale**	**Observations**
2009	1" = 500'	No significant changes noted for the Site or the vicinity.
2012	1" = 500'	Site: No significant changes noted. North: No significant changes noted. East: No significant changes noted. South: The existing retirement community is visible to the southwest. West: No significant changes noted.
2016	1" = 500'	No significant changes noted for the Site or the vicinity.

4.2.5 Ownership Records

Ownership information was obtained through ParcelQuest®, an on-line distributor of "Assessor-Direct property information throughout the State of California." The ownership entity for the Site was listed as "Angelo G Tsakopoulos 2012 Irrv Family Trust" (ParcelQuest®, 2020).

4.2.6 Building Department Records

WKA contacted the City of Elk Grove Building Department regarding any permits recorded for the building. Our correspondence was not returned prior to the completion of this report.

4.2.7 Local Street Directories

Local street directories with coverage of the Site and adjoining properties were obtained from EDR® (EDR®, 2020d). These documents contain business listings based on street number identifiers. The Site parcel does not have a current address; however, a previous Phase I ESA (WKA, Inc. 2001) indicated that 8499 Sheldon Road was the address of a larger tract of land that included the Site. The historical address was not listed in the city directories reviewed. A copy of the EDR® City Directory (EDR®, 2020e) is provided in Appendix C.

4.2.8 Zoning and Land Use Records

The Site use is listed as vacant (ParcelQuest, 2020).

The northeastern and south-central portions of the Site are located within a 500-year regulatory floodplain, as designated by the Federal Emergency Management Agency (FEMA). The remainder of the Site is designated as areas of minimal flood hazard. The floodplain map is provided in Appendix C.

WKA reviewed data provided on the National Pipeline Mapping System website. No pipelines were located within one-half mile of the Site (NPMS, 2020).

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

Wallace-Kuhl & Associates, Inc. (WKA, Inc.) prepared a Phase I ESA, dated May 18, 2001, for the Arcadian Village Unit 2, which consisted of 270 acre of undeveloped, dry-farmed land and included the Site. According to WKA, Inc. the Arcadian Village Unit 2 property was historically used for irrigated hay crop and pasture. WKA, Inc. reported a stockpile that measured 100-feet long, 60-feet wide, and seven-feet high on the "southeasterly" portion of the Arcadian Village Unit 2 property; however, the feature was not depicted on maps. WKA, Inc. indicated that the historical address of the property was 8499 Sheldon Road, but that it was not listed in the city directories that were reviewed. WKA, Inc. concluded that no evidence of RECs were identified for the Arcadian Village Unit 2 property.

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®, 2020a). Table 3 summarizes the researched ASTM required *Standard Environmental Record Sources*, as well as several *Additional Environmental Record Sources*, as defined in Sections 8.2.1 and 8.2.2 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 1527-13 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

Table 3

	EDR Listed Database	*ASTM E 1527-13 Search Distance*	No. of Facilities Listed (within Search Radius)
Federal RCRA CORRACTS Facilities List	*CORRACTS*	1-mile	0
Federal RCRA Generators List:			
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	1
	WMUDS/SWAT		0
State Leaking Underground Storage Tanks	*LUST- Reg 5 Geotracker*	½-mile	1
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	1
State Brownfield Sites	*US Brownfields*	½-mile	0
California Environmental Reporting System Hazardous Waste	*CERS Haz Waste*	¼-mile	2
Additional Environmental Record Sources			
Hazardous Waste & Substances Sites List	*CORTESE*	½-mile	0
DTSC EnviroStor (includes Cal-Sites)	*EnviroStor*	1-mile	3
SLIC	*SLIC - Reg 5*	½-mile	1
Cleaner Facilities	*Drycleaners*	¼-mile	0
HAZNET	*HAZNET*	¼-mile	0
Local - County			
Sacramento County Contaminated Sites	*Sac Co CS*	½-mile	1
Sacramento County Master List	*Sac Co ML*	½-mile	6

Review of the EDR® report indicates the Site is not listed on any of the EDR® databases. Regulatory information reviewed concerning the nearest facility in each cardinal direction identified within its respective ASTM search distance is detailed below.

Six listings were identified on the Sacramento County Master List database within 0.25 miles of the Site. The Sacramento County Master List is a database of all facilities that are regulated, permitted, and/or inspected by the Sacramento County Environmental Management Department. 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 Obie's Dump property, 8437 Sheldon Road, is located 0.15 miles west-northwest of the Site. The property is listed on Solid Water Landfill (SWL) and California Environmental Reporting System (CERS), the Department of Toxic Substances Control's (DTSC) EnviroStor, the Voluntary Cleanup Program, and the State Water Resources Control Board Spills, Leaks, Investigation, and Cleanup databases. According to a summary provided on the DTSC EnviroStor website, the property was excavated as a "borrow site" for soil and then used as a landfill and burn dump. According to a DTSC Fact Sheet, dated September 2006, the only contaminant of concern at the property was lead in soil. 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*) 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

Tsakopoulos Management Company, LLC did not authorize WKA to conduct a search for environmental liens and AULs.

[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*.

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 8.3.2.1 – Intervals* of the ASTM E 1527-13 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 late 1800s revealed that the Site has been vacant, grass-covered land since at least 1894.
- 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 1527-13 for the Sheldon Grove Subdivision. 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. If future activities reveal the presence of a water well near the location of the power pole observed during the site reconnaissance, the well should be abandoned according to Sacramento County requirements.

5.4 Exceptions and/or Deletions

No exceptions or deletions from the ASTM E 1527-13 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, August 10, 2020. 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. Additional research or receipt of information regarding the Site that was not disclosed or available to WKA during this assessment may result in revision of the conclusions. The conclusions in this report should be reevaluated if site conditions change. 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 one year 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 1527-13 Standard.

NMM:DBN:mr
H:/dept3/12865.01 - Phase I ESA Sheldon Grove Subdivision

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-2020b. *Certified Sanborn Map Report, Sheldon Grove Subdivision, Sheldon Road, Elk Grove, California, Inquiry Number 6145801.3*, Shelton, Connecticut, (August 5, 2020).

-2020c. *The EDR Historical Topographic Map Report, Sheldon Grove Subdivision, Sheldon Road, Elk Grove, California, Inquiry Number 6145801.4*, Shelton, Connecticut, (August 5, 2020).

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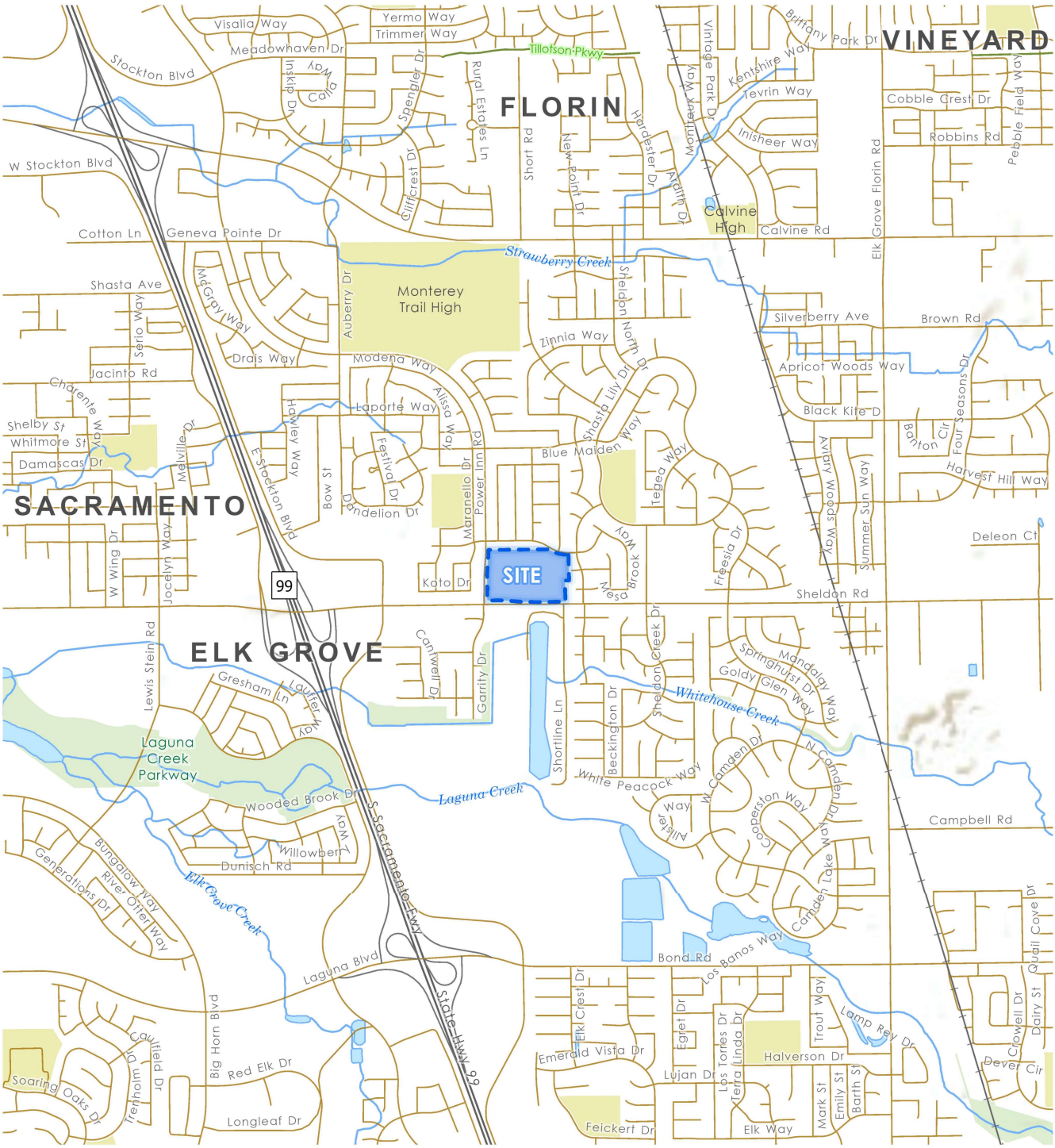
FIGURES



Spatial Data provided by Esri, NOAA, and USGS.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

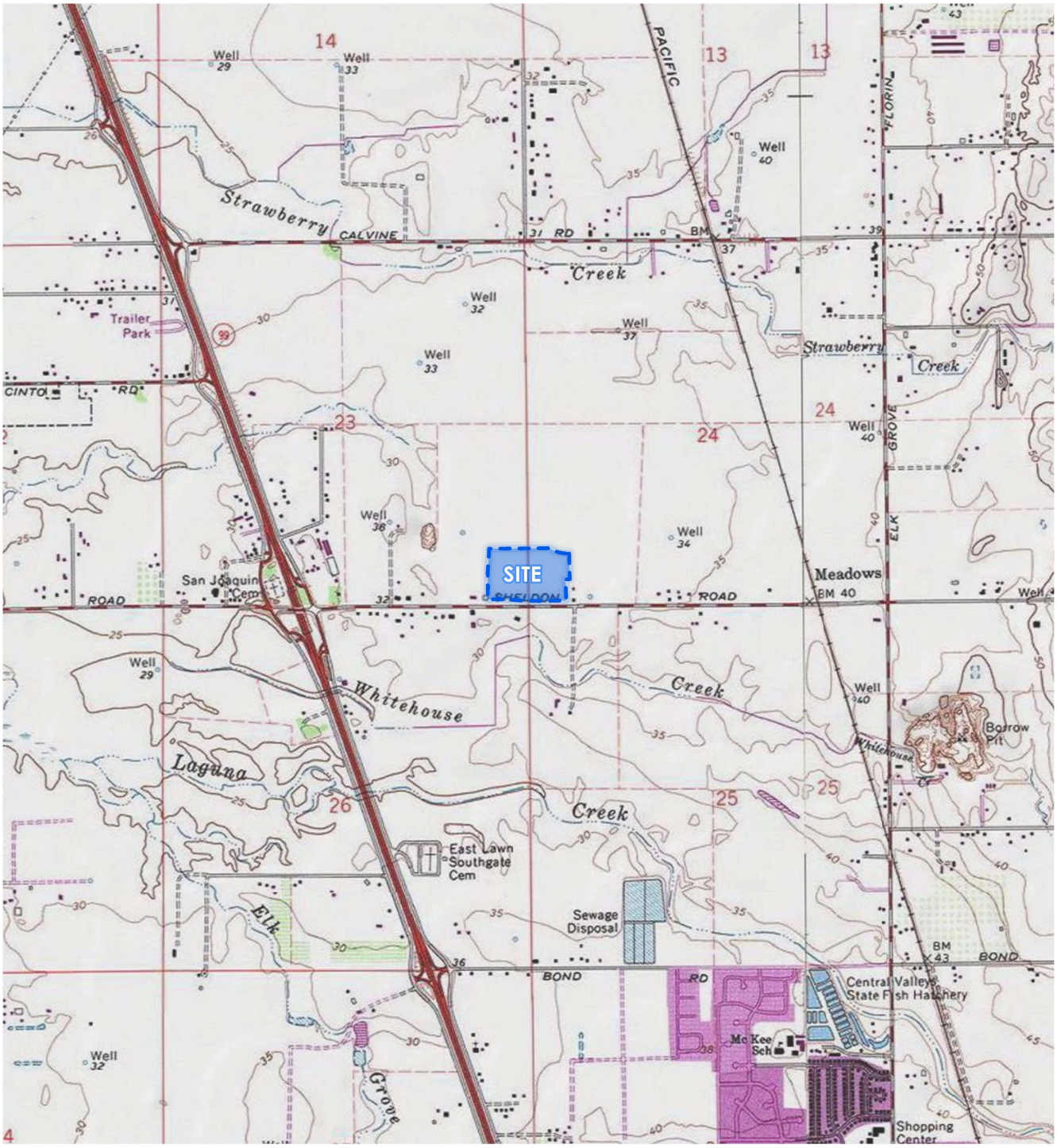
WallaceKuhl & ASSOCIATES

VICINITY MAP

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	1
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	KMB
DATE	08/2020
WKA NO.	12865.01



N

0 1,000 2,000

Feet

Topographic Basemap Adapted from the USGS 7.5' Digital Map Series
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

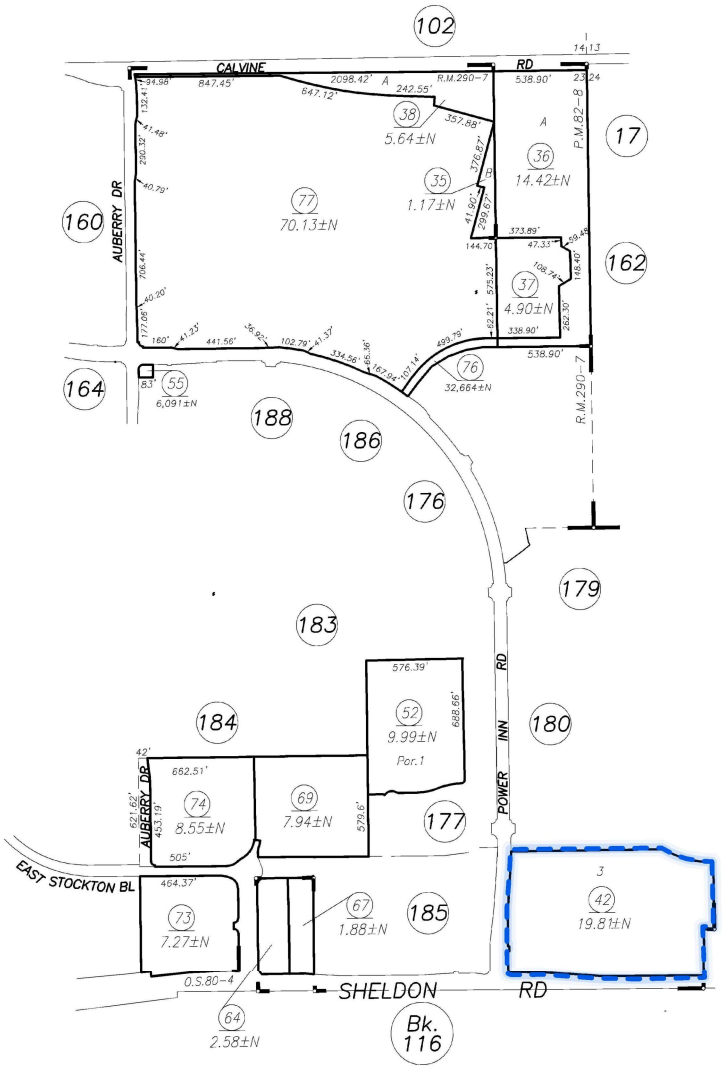
WallaceKuhl & ASSOCIATES

TOPOGRAPHIC MAP

SHELDON GROVE SUBDDIVISION

Elk Grove, California

FIGURE	2
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	KMB
DATE	08/2020
WKA NO.	12865.01



Approximate Site Boundary

N

0 500 1,000

Feet

Aerial imagery provided by Esri.
Parcel Map provided by the County of Sacramento Assessor's Office. Book 115, page 15.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

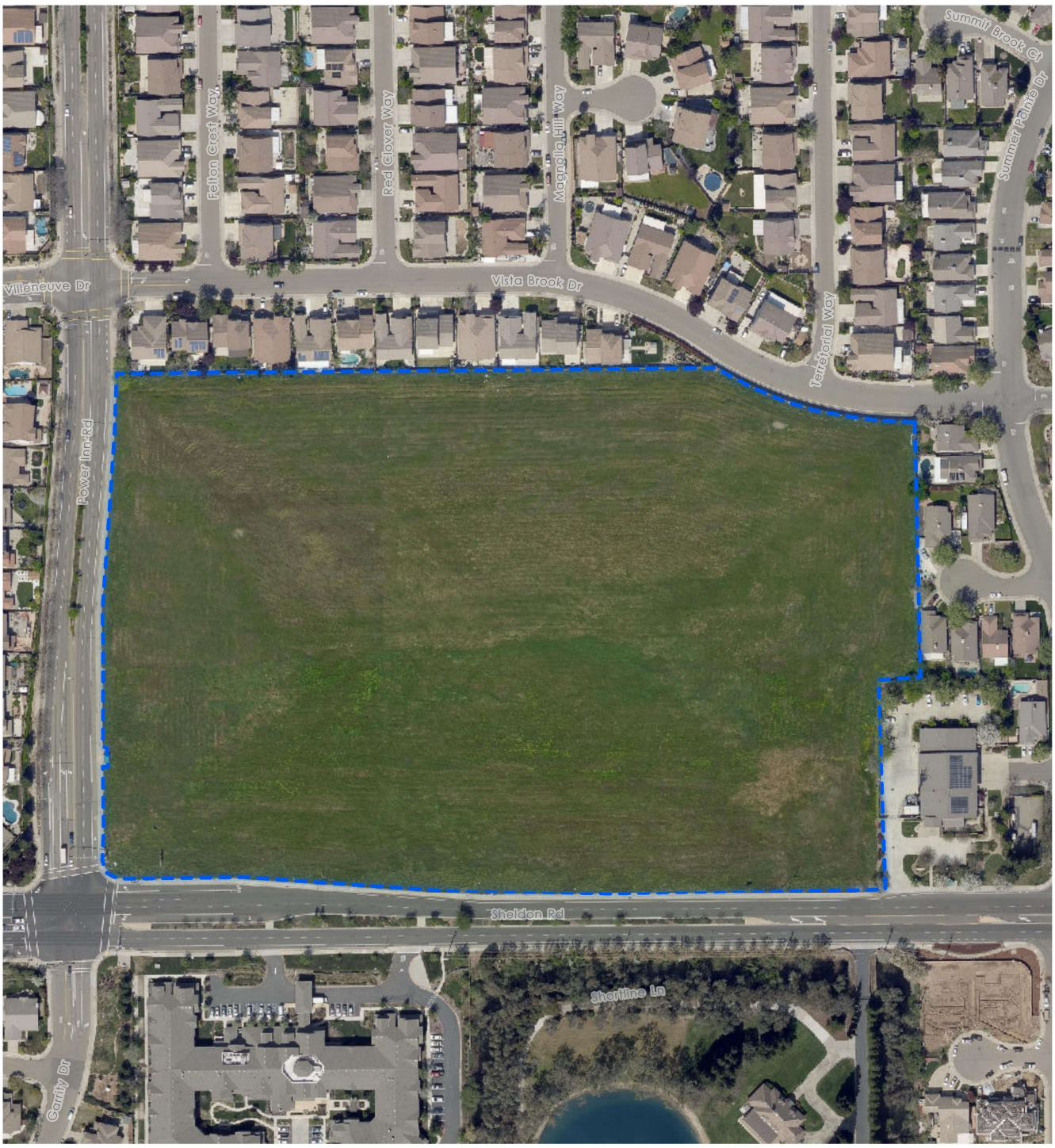
WallaceKuhl & ASSOCIATES

PARCEL MAP

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	3
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	KMB
DATE	08/2020
WKA NO.	12865.01



Approximate Site Boundary

N

0 100 200

Feet

Aerial imagery provided by Esri.
Projection: NAD 1983 2011 StatePlane California II FIPS 0402 Ft US

WallaceKuhl & ASSOCIATES

AERIAL SITE MAP

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	4
DRAWN BY	RWO
CHECKED BY	NMM
PROJECT MGR	xxx
DATE	08/2020
WKA NO.	12865.01



Looking southeast at the general view of the Site.



Looking at miscellaneous debris located along the northern property boundary.



Looking west at a power pole on the southeastern portion of the Site.



Looking at the electrical box on the power pole.

Wallace Kuhl & Associates

COLOR PHOTOGRAPHS

SHELDON GROVE SUBDIVISION

Elk Grove, California

FIGURE	5
DRAWN BY	NMM
CHECKED BY	KMB
PROJECT MGR	KMB
DATE	8/20

WKA NO. 12865.01

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)

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 1527-13 User Questionnaire
and Helpful Documents Checklist

HELPFUL DOCUMENTS
SHELDON GROVE SUBDIVISION

Are you aware of any of the below-listed reports, as they relate specifically to the property?

X Yes ____ No (if yes, please check all that apply):

- ☒ Environmental Site Assessment reports (Phase I ESA, Asbestos sampling reports, etc.)
- ☐ Environmental Compliance Audit reports
- ☒ 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

Completed by Gregg Jones

Date: 8/6/20

Title: Property Director

Signature: [signature]

E 1527-13 USER QUESTIONNAIRE
SHELDON GROVE SUBDIVISION

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?

N/A

(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*?

N/A

(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?

Grazing

(b.) What, if any, specific chemicals are present or once were present at the *property*?

N/A

---

[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 1527-13 USER QUESTIONNAIRE (cont.)
SHELDON GROVE SUBDIVISION

Questions 6 continued:

(c.) What, if any, spills or other chemical releases have taken place at the *property*?

None to my knowledge

(d.) What, if any, environmental cleanups have taken place at the *property*?

None to my knowledge

(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*?

NO

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: Gregg Jones

Date: 8/6/20

Title: Property Director

Signature:

Phone Number: 916-972-7000

Relationship to the Site (i.e., owner, lender, property manager): Property Director/Manager

APPENDIX C

Supporting Documents

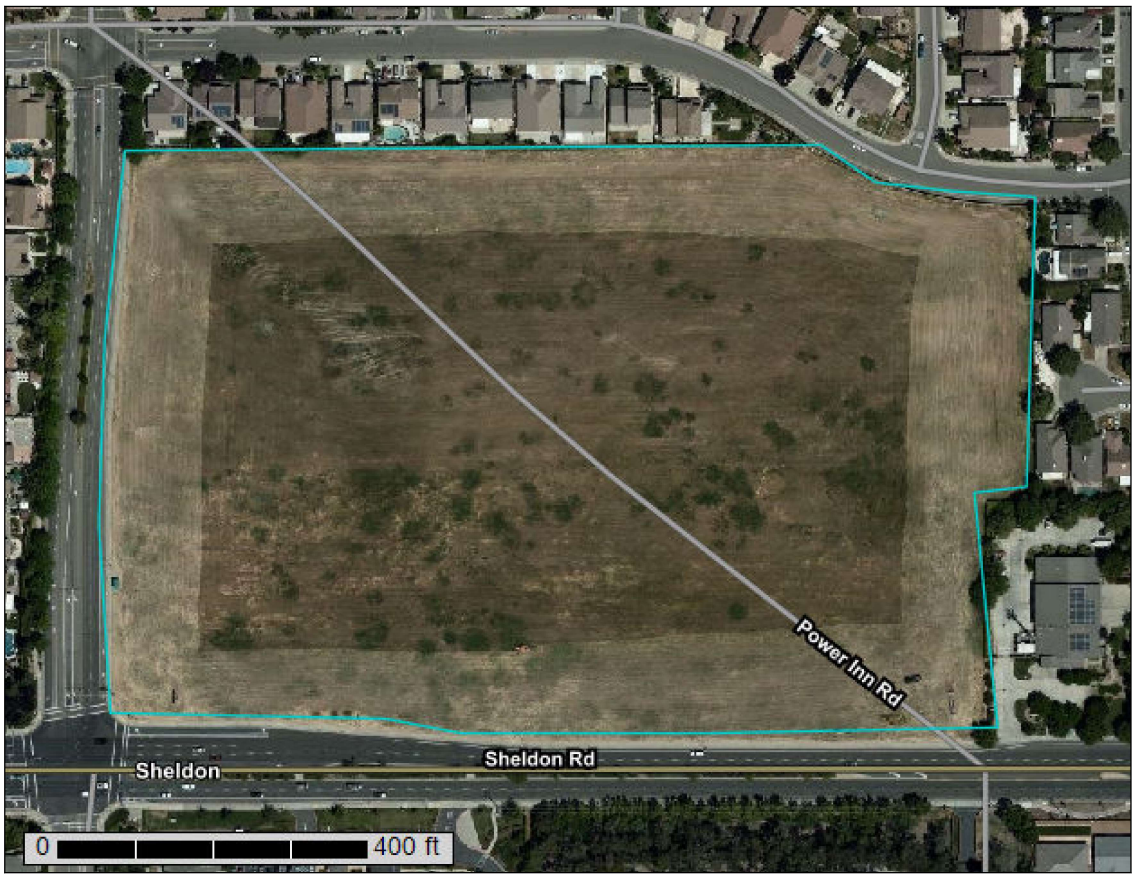
United States Department of Agriculture

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



August 6, 2020

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: 1:2,020 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

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 19, May 29, 2020

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
176	Madera-Galt complex, 0 to 2 percent slopes	3.2	16.1%
213	San Joaquin silt loam, leveled, 0 to 1 percent slopes	15.8	80.1%
217	San Joaquin-Galt complex, leveled, 0 to 1 percent slopes	0.7	3.7%
Totals for Area of Interest		**19.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sacramento County, California

176—Madera-Galt complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhnn
Elevation: 20 to 250 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 250 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Madera and similar soils: 50 percent
Galt and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madera

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 15 inches: loam
H2 - 15 to 29 inches: clay
H3 - 29 to 60 inches: indurated

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches; 29 to 60 inches to duripan
Drainage class: Moderately 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
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R017XD047CA - LOAMY CLAYPAN
Hydric soil rating: No

Description of Galt

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 13 inches: clay
H2 - 13 to 32 inches: clay
H3 - 32 to 60 inches: cemented

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 32 to 60 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: About 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: R017XD001CA - CLAYEY
Hydric soil rating: Yes

Minor Components

Unnamed, basin soils

Percent of map unit: 5 percent
Hydric soil rating: No

Clear lake

Percent of map unit: 4 percent
Landform: Basin floors
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Hydric soil rating: Yes

Unnamed, steeper slopes

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed, rarely flooded

Percent of map unit: 3 percent
Hydric soil rating: No

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 capacity: 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

Galt
Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Hedge
Percent of map unit: 2 percent
Hydric soil rating: No

Kimball
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed, rarely flooded
Percent of map unit: 1 percent
Hydric soil rating: No

217—San Joaquin-Galt complex, leveled, 0 to 1 percent slopes

Map Unit Setting
National map unit symbol: hhpz
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: 45 percent
Galt and similar soils: 40 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 15 inches: silt loam
H2 - 15 to 20 inches: clay loam
H3 - 20 to 46 inches: indurated
H4 - 46 to 60 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches; 20 to 46 inches to duripan
Drainage class: Moderately 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
Available water capacity: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Galt

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: silt loam
H2 - 6 to 19 inches: clay
H3 - 19 to 38 inches: clay
H4 - 38 to 60 inches: cemented

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 38 to 60 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
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Clear lake

Percent of map unit: 4 percent
Landform: Basin floors
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Hydric soil rating: Yes

Durixeralfs

Percent of map unit: 4 percent
Hydric soil rating: No

Xerarents

Percent of map unit: 4 percent
Hydric soil rating: No

Kimball

Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed, rarely flooded

Percent of map unit: 1 percent
Hydric soil rating: No

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Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624

Inquiry Number: 6145801.3
August 05, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/05/20

Site Name:

Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624
EDR Inquiry # 6145801.3

Client Name:

Wallace - Kuhl & Associates
3050 Industrial Boulevard
West Sacramento, CA 95691
Contact: Nancy Malaret

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PO # NA

Project 12865.01

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Sanborn® Library search results

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Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624

Inquiry Number: 6145801.4
August 05, 2020

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

08/05/20

Site Name:	Client Name:
Sheldon Grove Subdivision	Wallace - Kuhl & Associates
Sheldon Road	3050 Industrial Boulevard
Elk Grove, CA 95624	West Sacramento, CA 95691
EDR Inquiry # 6145801.4	Contact: Nancy Malaret

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Search Results:		*Coordinates:*	
P.O.#	NA	**Latitude:**	38.439183 38° 26' 21" North
Project:	12865.01	**Longitude:**	-121.39 -121° 23' 24" West
		UTM Zone:	Zone 10 North
		UTM X Meters:	640510.78
		UTM Y Meters:	4255772.60
		Elevation:	34.00' above sea level

Maps Provided:

2012
1979, 1980
1975
1968
1947
1941
1909
1894

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Florin
2012
7.5-minute, 24000

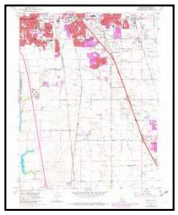


Elk Grove
2012
7.5-minute, 24000

1979, 1980 Source Sheets



Elk Grove
1979
7.5-minute, 24000
Aerial Photo Revised 1978



Florin
1980
7.5-minute, 24000
Aerial Photo Revised 1978

1975 Source Sheets



Florin
1975
7.5-minute, 24000
Aerial Photo Revised 1975

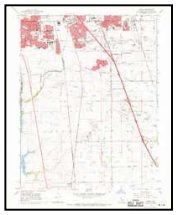


Elk Grove
1975
7.5-minute, 24000
Aerial Photo Revised 1975

1968 Source Sheets



Elk Grove
1968
7.5-minute, 24000
Aerial Photo Revised 1966



Florin
1968
7.5-minute, 24000
Aerial Photo Revised 1966

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



GALT
1947
15-minute, 50000

1941 Source Sheets



Franklin
1941
15-minute, 62500
Aerial Photo Revised 1939

1909 Source Sheets



Florin
1909
7.5-minute, 31680



Elk Grove
1909
7.5-minute, 31680

1894 Source Sheets



Lodi
1894
30-minute, 125000

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

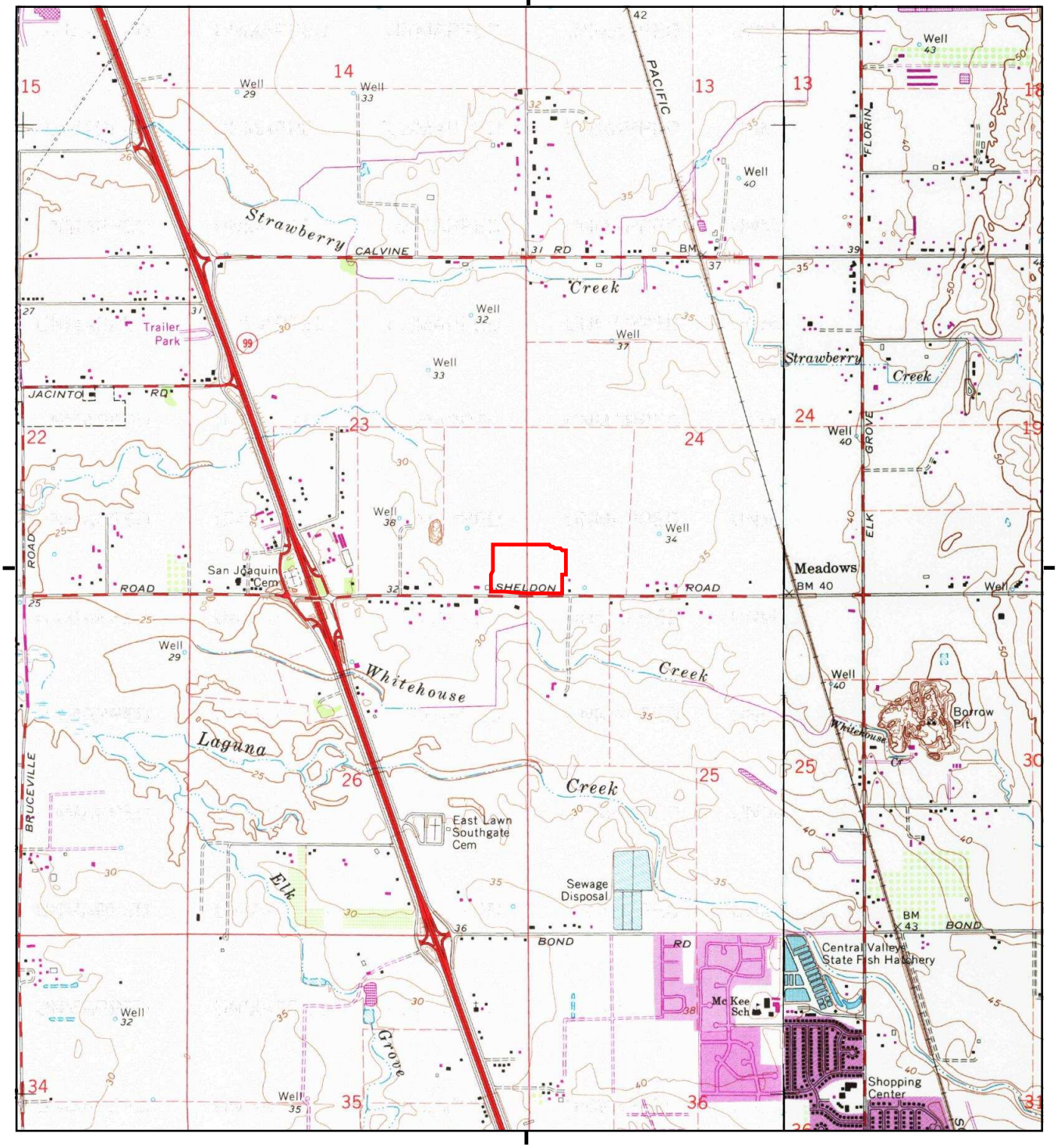
TP, Florin, 2012, 7.5-minute
E, Elk Grove, 2012, 7.5-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1979, 1980



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

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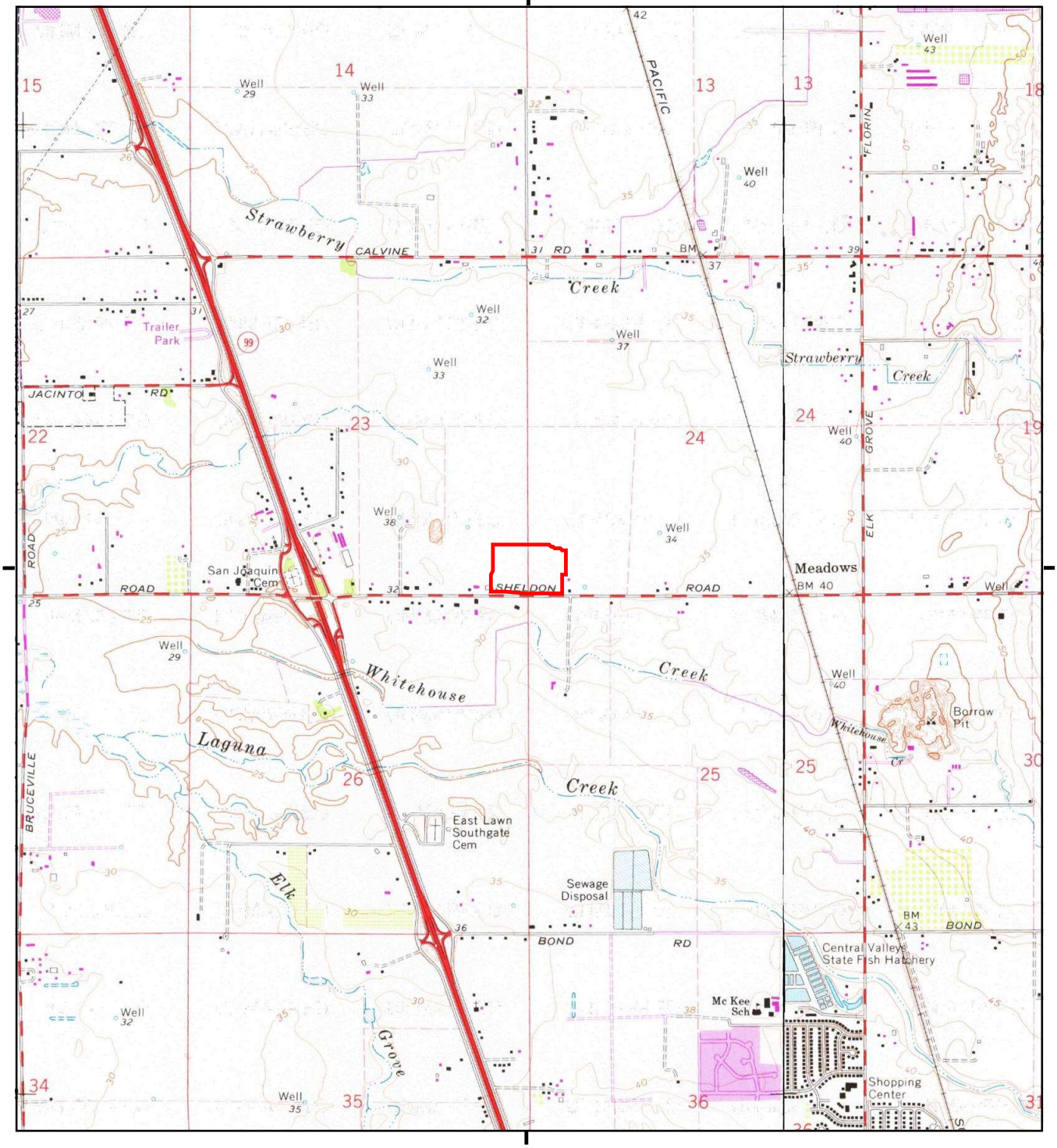
E, Elk Grove, 1979, 7.5-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1975



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

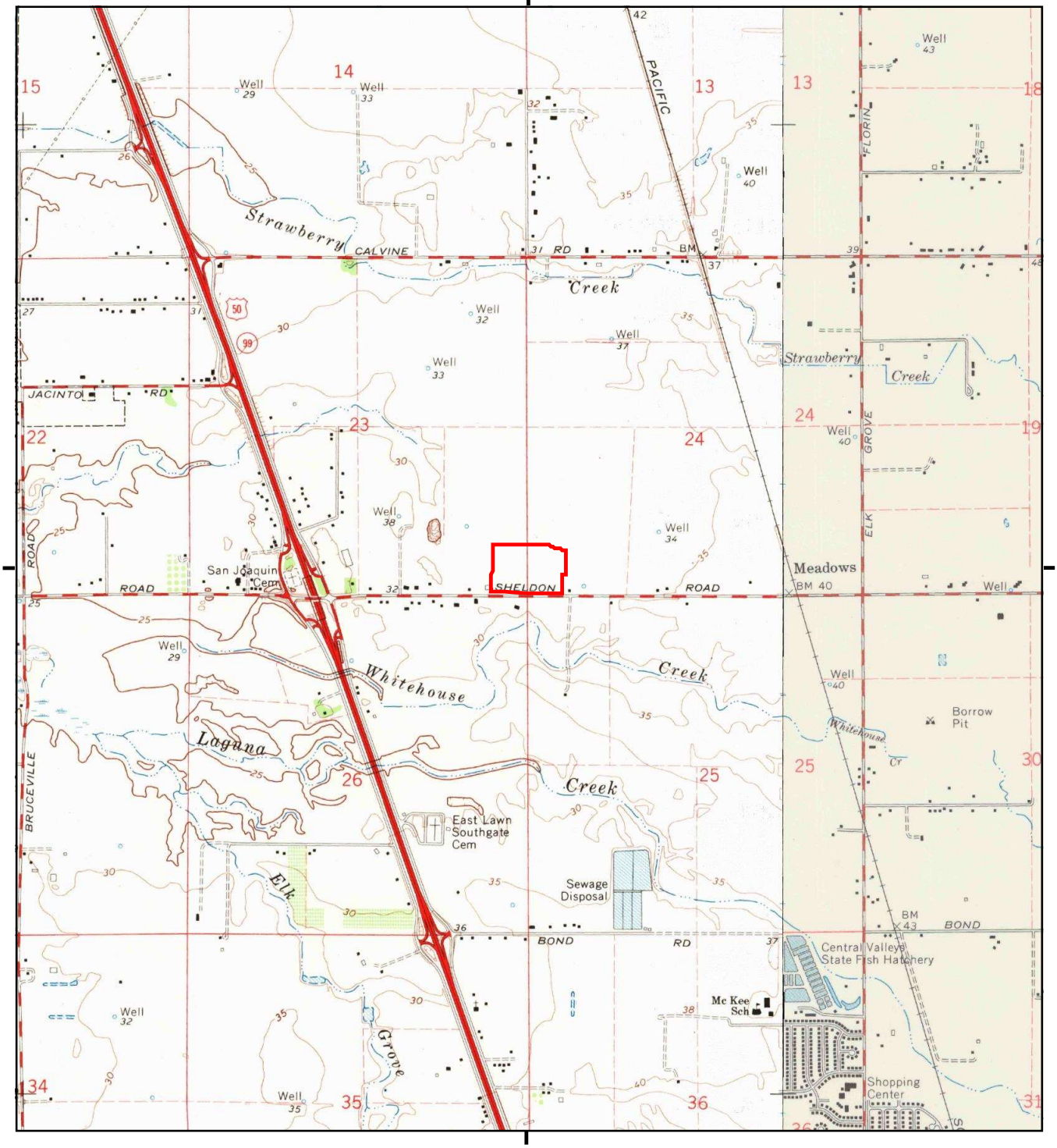
TP, Florin, 1975, 7.5-minute
E, Elk Grove, 1975, 7.5-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1968



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

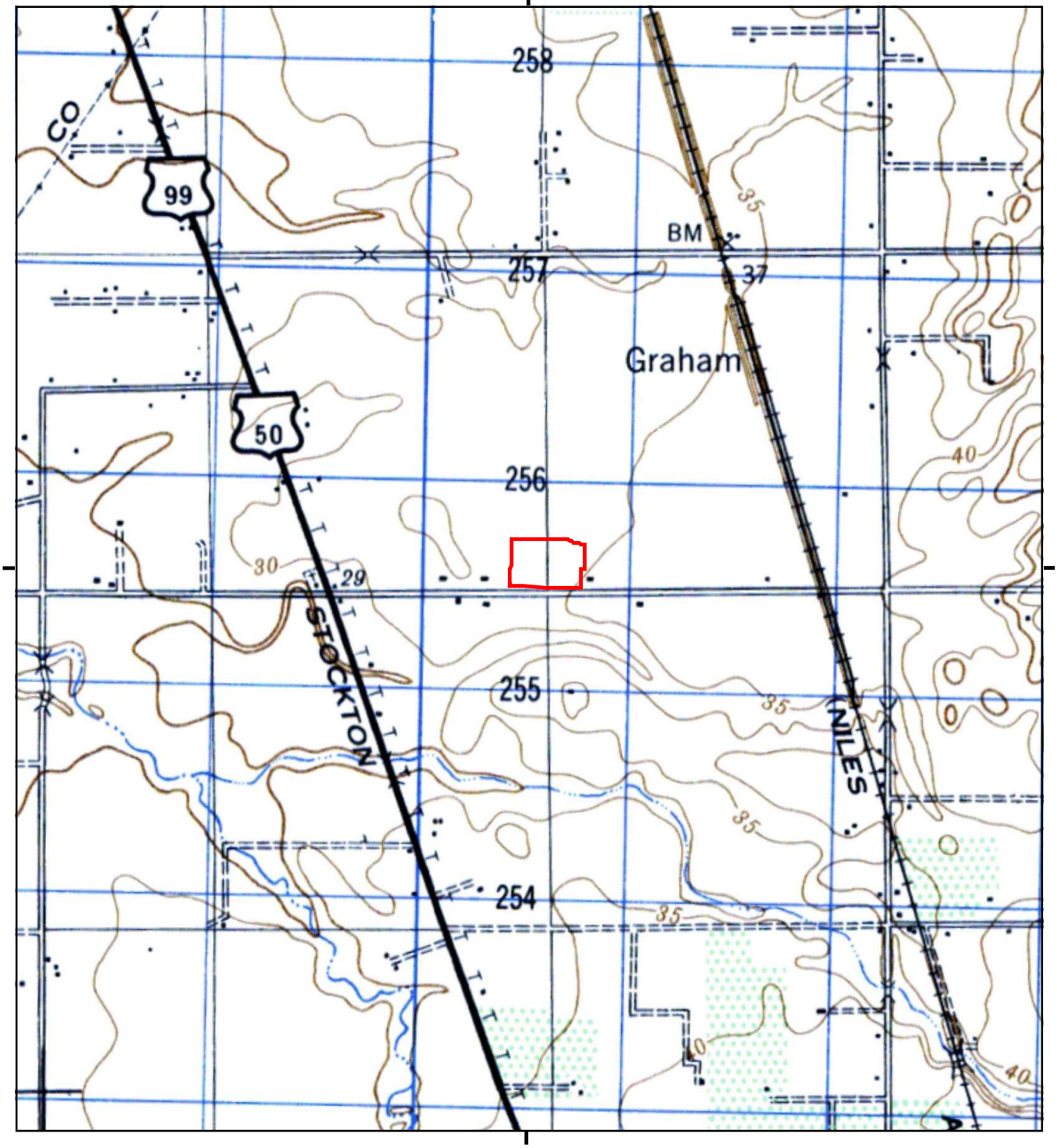
TP, Florin, 1968, 7.5-minute
E, Elk Grove, 1968, 7.5-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1947



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

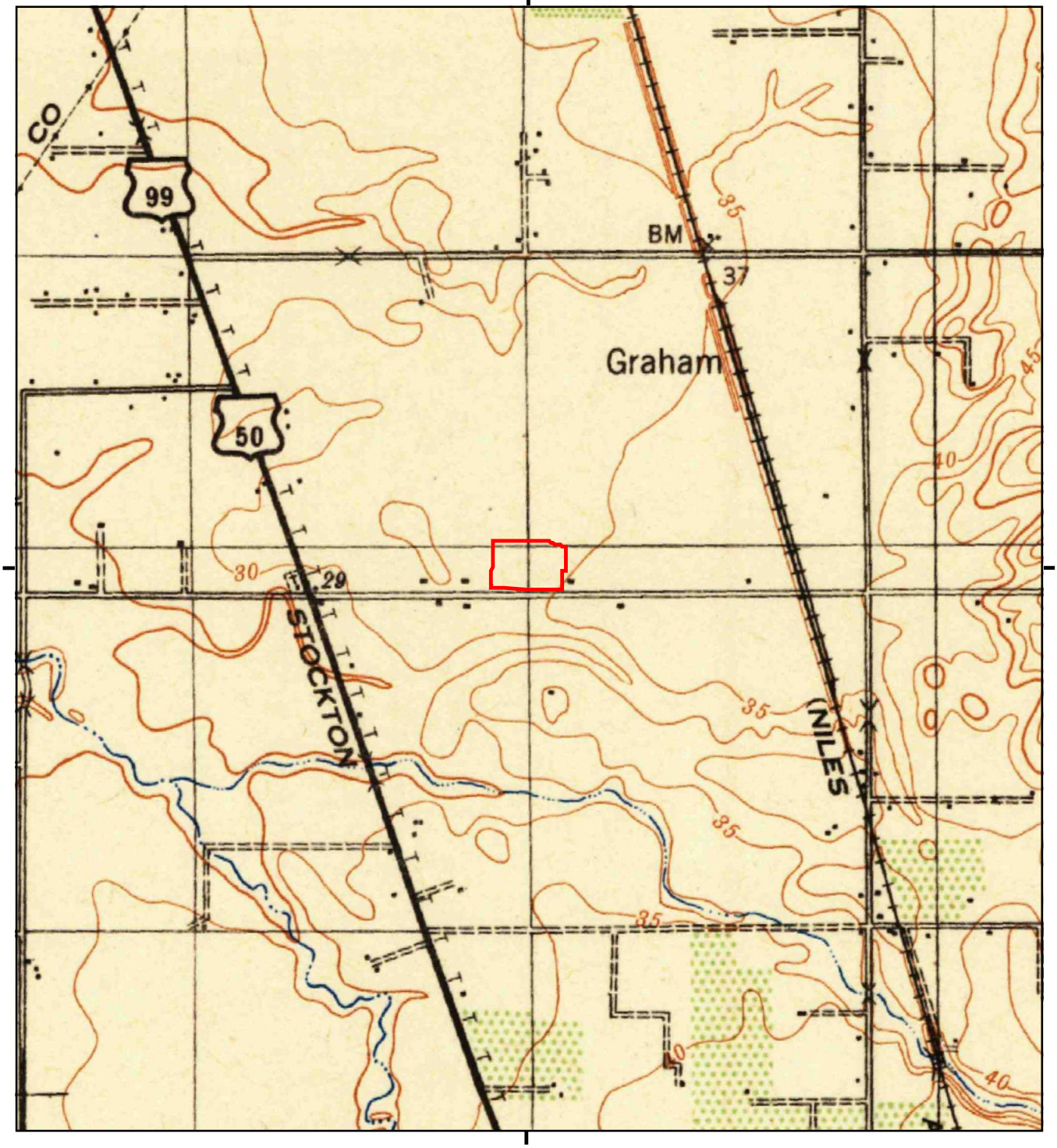
TP, GALT, 1947, 15-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1941



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

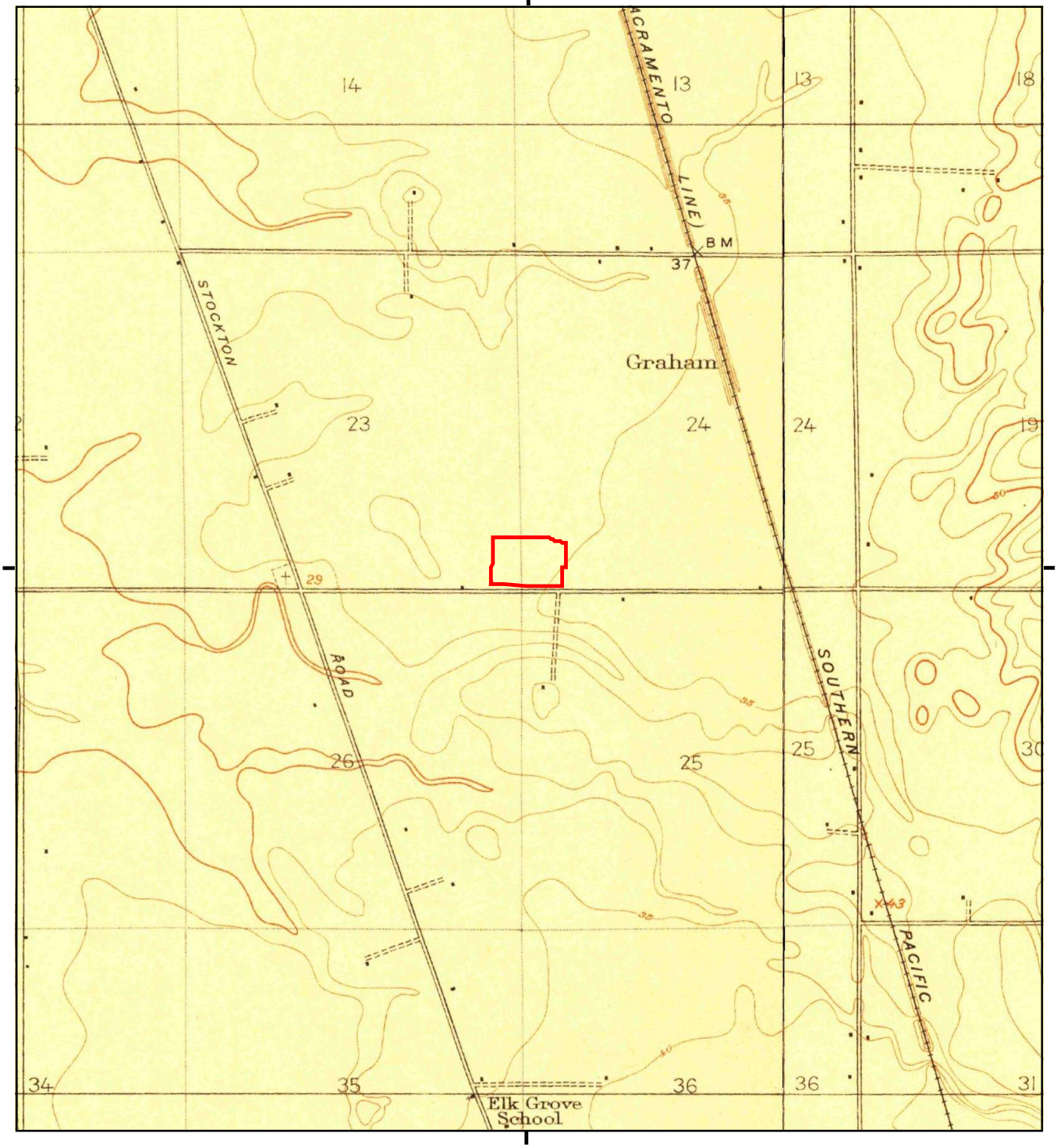
TP, Franklin, 1941, 15-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
Elk Grove, CA 95624
CLIENT: Wallace - Kuhl & Associates

N

Historical Topo Map

1909



This report includes information from the following map sheet(s).

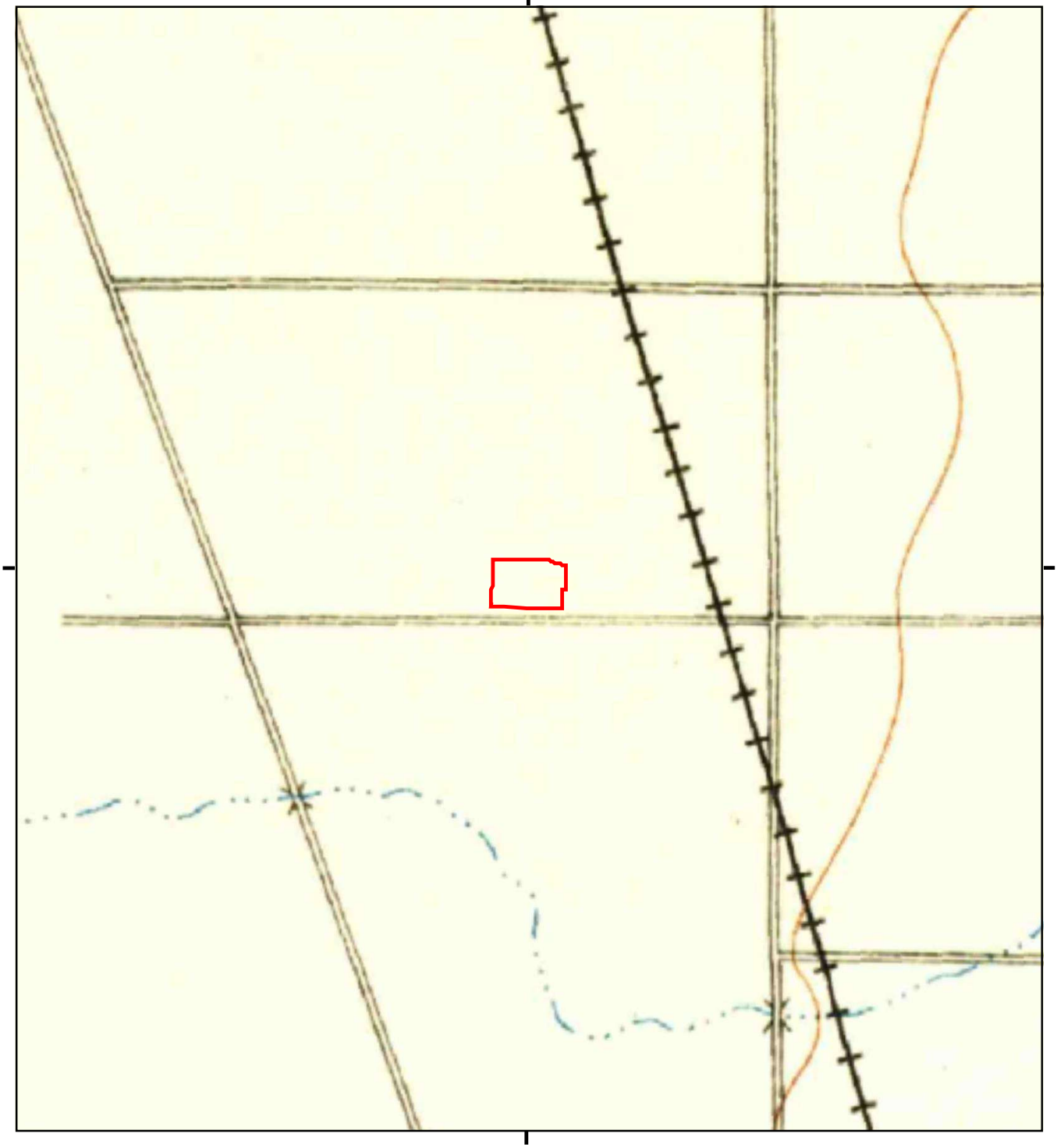
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Florin, 1909, 7.5-minute
E, Elk Grove, 1909, 7.5-minute

SITE NAME: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
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: Sheldon Grove Subdivision
ADDRESS: Sheldon Road
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CLIENT: Wallace - Kuhl & Associates

N

Sheldon Grove Subdivision

Sheldon Road

Elk Grove, CA 95624

Inquiry Number: 6145801.8

August 05, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

08/05/20

Site Name:

Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624
EDR Inquiry # 6145801.8

Client Name:

Wallace - Kuhl & Associates
3050 Industrial Boulevard
West Sacramento, CA 95691
Contact: Nancy Malaret

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1993	1"=500'	Acquisition Date: May 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 #: 6145801.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6145801.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6145801.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 6145801.8
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 6145801.8

YEAR: 1993

= 500'

N

EDR



INQUIRY #: 6145801.8

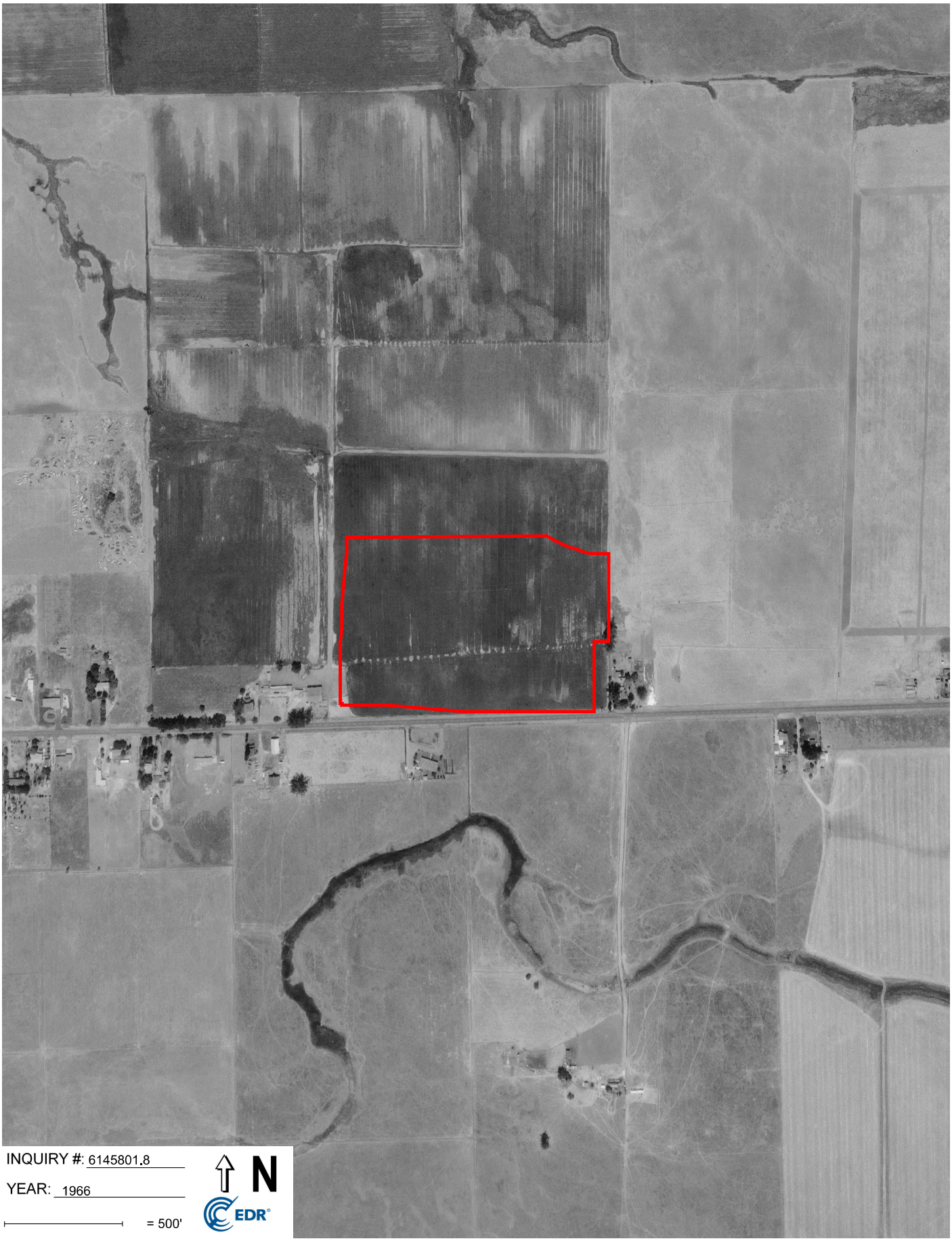
YEAR: 1984

= 500'

N

EDR


INQUIRY #: 6145801.8
YEAR: 1972
= 500'
N
EDR



INQUIRY #: 6145801.8

YEAR: 1966

= 500'

N

EDR



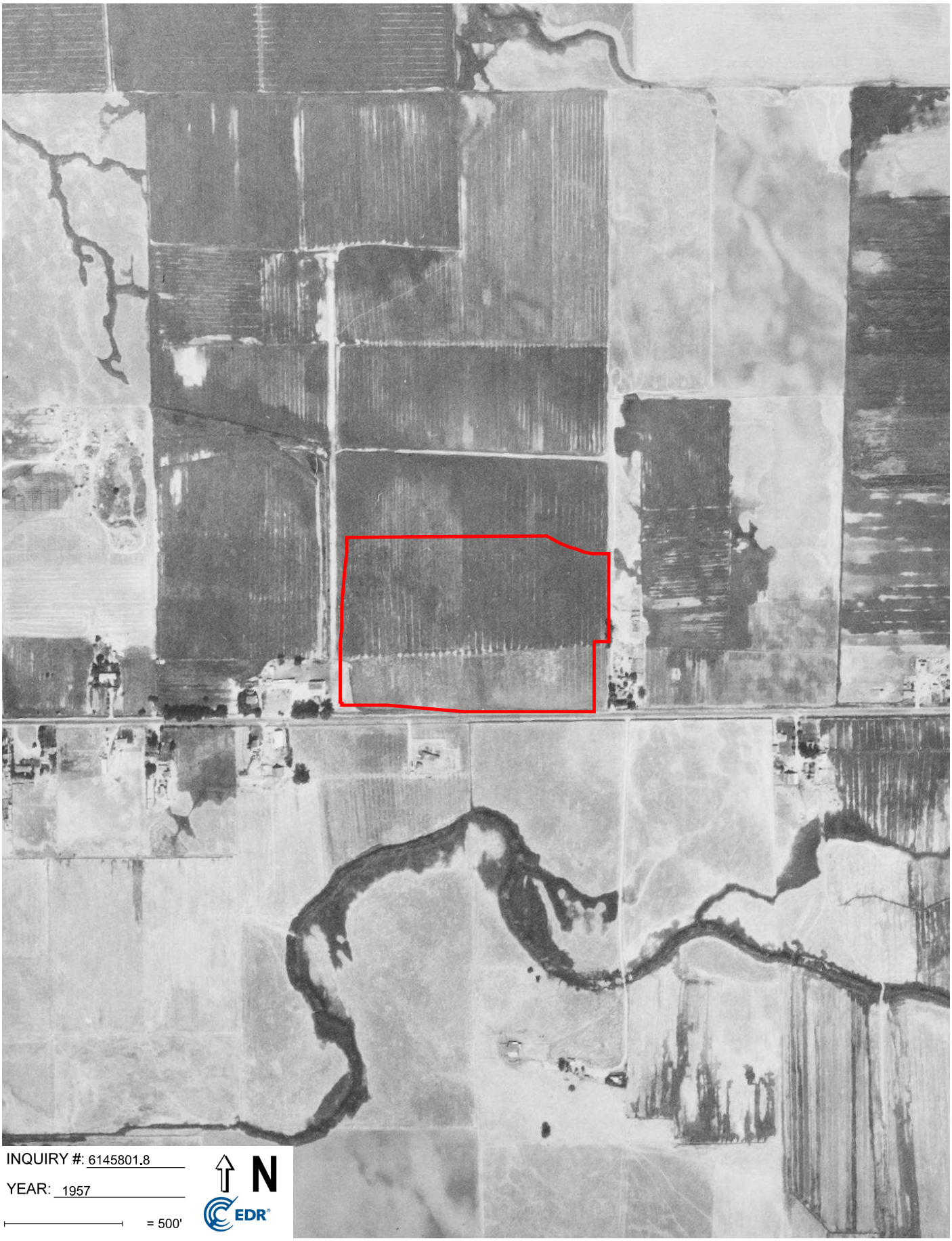
INQUIRY #: 6145801.8

YEAR: 1964

= 500'

N

EDR



INQUIRY #: 6145801.8

YEAR: 1957

= 500'

N

EDR



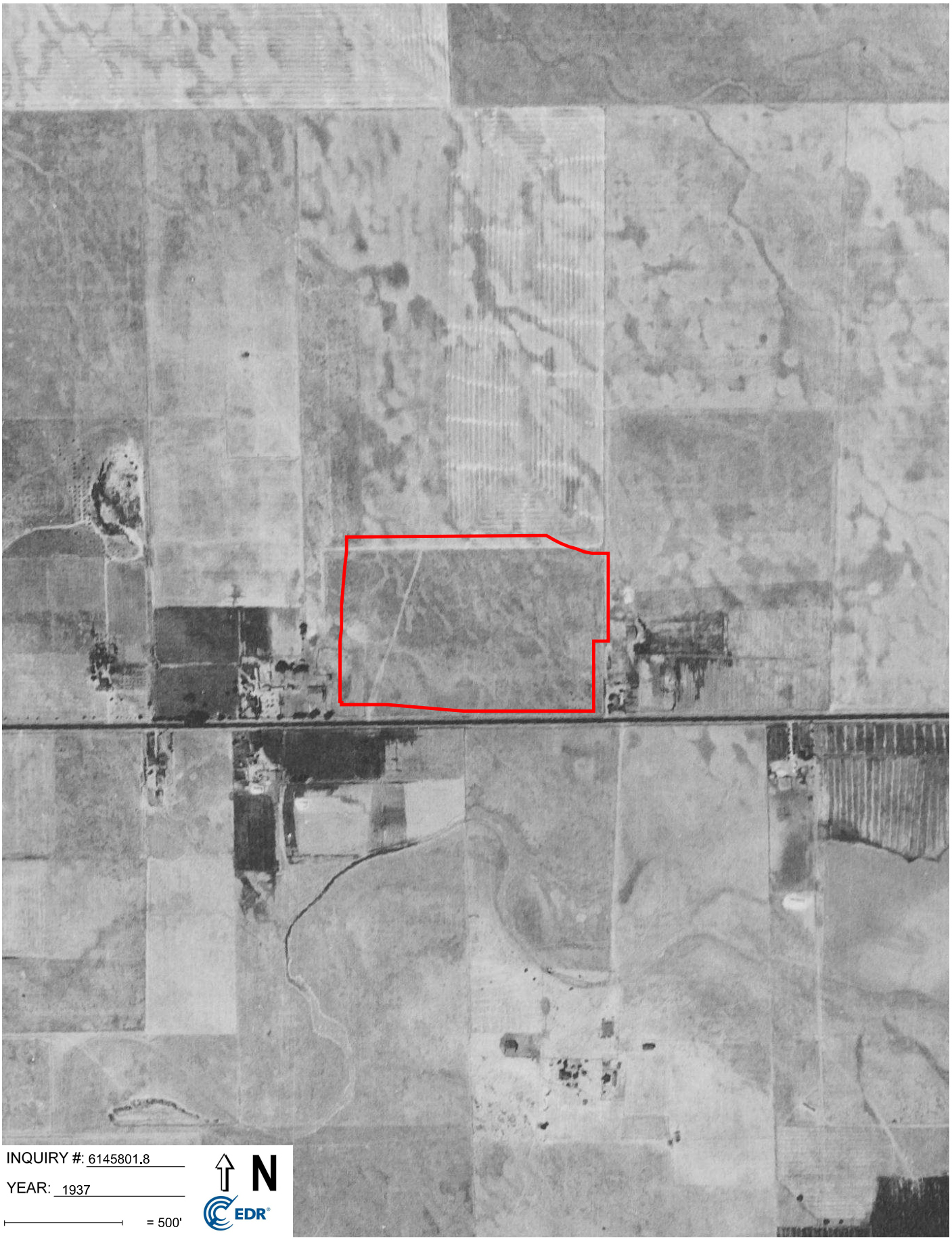
INQUIRY #: 6145801.8

YEAR: 1947

= 500'

N

EDR



INQUIRY #: 6145801.8

YEAR: 1937

= 500'

N

EDR

Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624

Inquiry Number: 6145801.5
August 10, 2020

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available 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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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
1986	☑	☐	Haines Company
1981	☑	☐	Haines Company
1977	☑	☐	Haines Company
1971	☑	☐	Haines Company
1967	☐	☐	Haines Company
1961	☐	☐	Haines Company

FINDINGS

TARGET PROPERTY STREET

Sheldon Road
Elk Grove, CA 95624

Year	CD Image	Source	
SHELDON RD			
2017	pg A2	EDR Digital Archive	
2014	pg A6	EDR Digital Archive	
2010	pg A10	EDR Digital Archive	
2005	pg A12	EDR Digital Archive	
2000	pg A14	EDR Digital Archive	
1995	pg A15	EDR Digital Archive	
1992	pg A16	EDR Digital Archive	
1986	pg A17	Haines Company	
1986	pg A18	Haines Company	
1981	pg A19	Haines Company	
1977	pg A20	Haines Company	
1971	pg A21	Haines Company	
1967	-	Haines Company	Street not listed in Source
1961	-	Haines Company	Street not listed in Source

FINDINGS

CROSS STREETS

Year	CD Image	Source	
VISTA BROOK DR			
2017	pg. A5	EDR Digital Archive	
2014	pg. A9	EDR Digital Archive	
2010	pg. A11	EDR Digital Archive	
2005	pg. A13	EDR Digital Archive	
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source
1986	-	Haines Company	Street not listed in Source
1981	-	Haines Company	Street not listed in Source
1977	-	Haines Company	Street not listed in Source
1971	-	Haines Company	Street not listed in Source
1967	-	Haines Company	Street not listed in Source
1961	-	Haines Company	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2017

8400	NEWLAND, NORMAN D
	SHELDON ROAD GROOMERS
8422	WILSON, TOM T
8476	ADAME, HENRY R
	ANDERSON, ANNA
	BEBICH, JUNE E
	BONSLETT, WINNIFRED A
	BOSCHEE, FERDINAND A
	BOWMAN, JACK L
	BRANDON, PATRICIA A
	BRIGGS, ANN W
	BRIM, ERMA L
	BRYANT, CHARLOTTE E
	CAMDEN SPRINGS
	CAMPBELL, BERNICE E
	CASTILLO, LANI
	CLARK, SHIRLEE A
	COLBURN, PAT F
	COTTRELL, EUGENE H
	COVINGTON, JOE E
	CURREY, KATHLEEN
	DAMES, G
	DIXON, DOLORES W
	DRAKE, MARILYN E
	EEZITH, JUNE
	EVLEIGHTER, JEREMIAH
	FEASTER, ROSEMARY A
	FLETCHER, CLAUDINE A
	FORD, KEVIN L
	GARDNER, YVONNE
	GEORGE, JAMES C
	GLAZE, MARVIN L
	GOVIA, ANN L
	GOVIA, WILLIAM
	GRAY, ARNETTE D
	GREGOIRE, GEORGE W
	HENRY, MARY E
	HOFF, MARGIE C
	ISA, SOLITA M
	JAMES, BETH W
	JOHNSON, BRENT L
	KELL, TODD B
	KENNELLY, THOMAS J
	KOYAMA, SHERWIN N
	LEE, SCOTT M
	LEONARD, WARREN G
	MANDER, DANIEL H
	MELNICK, MARGARET C
	MERRY, JAMES E
	MEYER, ARDITH J

SHELDON RD 2017 (Cont'd)

8476	MONTANO, KEITH H
	MORI, RUTH R
	MUNOZ, RAMIRO
	MURRIAN, DIANE
	OSHAUGHNESSY, VICKI
	PAULSEN, DAVID E
	PEREIRA, SHIRLEY M
	PERKINS, ALICE L
	PLUBELL, LEOLA F
	REINHARDT, BETTY A
	RENFRO, EUGENE P
	RETNAL, DAVID
	ROEMER, ROBERT A
	ROSSI, JANIS E
	SAKURAI, ANNA G
	SALVATORI, CAROL
	SCHINDLER, DEBORAH D
	SCHOENFELD, MARLYN R
	SCHWEINFURTH, MARJORIE E
	STONEKING, MARION J
	TAYLOR, GEORGE F
	TAYLOR, NORWOOD M
	TERRY, LYNDA F
	THERRE, LAUREN C
	TOYE, ROBERT E
	TRAPP, FLORENCE
	VANCE, MAXINE M
	VELASCO, RAYMOND L
	WALLACE, KATHLEEN J
	WEGAT, DEBRA R
	WEGAT, RUSSELL D
	WESTBURG, SHANE
	WHITAKER, RAY H
	WHITMAN, JOYCE L
	WICK, ELDRED H
	WILDE, KATHLEEN C
	WILLIAMS, THEDA L
	WORLAND, JOY C
	WORTH, ARLIE R
	YOUNG, JACK C
8604	WORLDS FAME PET GROOMING SALON
8645	GOULART, NORMA J
8651	WOODS ELECTRIC
	WOODS, TODD A
8665	WITT, HAROLD W
8679	SPEAR, KEEN
8693	LAW, SAM D
8821	J J & R CAFE
8829	BRADSHAW OPTOMETRY
	KUMON LEARNING CENTER

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2017 (Cont'd)

8829	LUXE SPA & SALON
	TOPS YOGURT & SMOOTHIES
8835	CERVANTES ANDREA DDS
	MARTIAL ARTS LEES KOREAN
	SHELDON GROVE FAMILY DENTAL
8839	CHASONS CRAB STADIUM
8890	SENTRY STORAGE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

VISTA BROOK DR 2017

8472	VALDEZ, MARIO E
8476	CHAM, TINA
8484	TRANNGUYEN, TUAN N
8492	SAEPHANH, GAIN
8496	MUSHTAQ, SHAMIM M
8500	QUACH, HAN P
8508	OUYANG, KE H
8512	LIU, YING L
8513	TRAN, TINH
8516	GRINO, LEE A
8517	NGUYEN, LUONG H
8521	ESCALANTE, FERNANDO
8525	SARANILLA, ROBERT
8529	HANG, YING

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2014

8400	HOLTZCLAW, DAVID W
	SHELDON ROAD GROOMERS
8422	WILSON, HUGH T
8476	ARGO, JANE S
	BARCLAY, EDNA
	BELL, DONALD F
	BOWERS, VIRGINIA H
	BOWMAN, JACK L
	BRENNAN, CELESTINE H
	BRIGGS, ANN W
	CAMDEN SPRINGS
	CAMDEN SPRINGS RETIREMENT RESIDENCE
	CAMDEN, SPRINGS
	CARDINAL, ANN H
	CASTLENAN, J
	CHAVEZ, MIKIE A
	CLARK, JANINA K
	CLARK, SHIRLEE A
	COLE, JOHNNIE H
	COMSTOCK, NANCY
	COTTRELL, EUGENE H
	COVINGTON, JOE E
	CRADDOCK, DANIEL T
	CRUSE, MELVIN H
	CURREY, KAY
	DAMES, G
	DAVIS, VERA
	DIETZ, FRANCES M
	DILL, VERNA
	DUHAIN, AULTA L
	DUNLOP, MARK A
	FEASTER, ROSEMARY A
	FONTANILLA, ADELAIDA F
	FRUCHEY, RICHARD N
	GAULT, DOUGLAS R
	GEORGE, JAMES C
	GLAZE, MARVIN L
	GONZALES, STEPHNIE
	GOODENOW, CHARLES B
	GREGOIRE, GEORGE W
	HARPER, DAVID C
	HOMAN, ANNETTE V
	HOWARD, JEAN P
	HUNTER, LEWIS K
	HUNTER, ROBERT
	JOANNE, CARDULLO
	KENNELLY, THOMAS J
	KRAUS, BERTHA
	MANDER, DANI
	MCGEE, THOMAS A

SHELDON RD 2014 (Cont'd)

8476	MEDEIROS, RICHARD L
	MELNICK, MARGARET C
	MEREDITH, GERALD
	METZLER, E
	NEUPERT, ERICH
	PAQUETTE, SARAH E
	PATTERSON, LOIS L
	PEREZ, LYDIA L
	PHILLIPS, ENOLA
	PLUBELL, LEOLA F
	RASMUSSEN, VIDAL
	RAWLS, JOAN M
	RETNAL, DAVID
	RINELLI, SAMUEL R
	RITTER, BETTY L
	ROBINSON, LORRAINE J
	RUPP, TODD
	RUSH, JANET W
	RUSH, JEANETTE
	RUSSELL, MADLINE C
	SEIBEL, VIOLA A
	SILVA, MARGUERITE M
	STELTER, RITA
	STONEKING, MARION J
	SUSICH, MARGARET M
	SWANSON, RODGERS
	TERRY, LYNDA F
	TOYE, ROBERT E
	TRAPP, FLORENCE
	TURNER, SUSAN
	VICTOR, RUTH N
	WAGNER, BETTY J
	WHITAKER, RAY H
	WHITE, NORMA J
	WILDE, RAY L
	WORTH, ARLIE R
8604	WORLDS FAME PET GROOMING SALON
8624	ZENTNER, HELENE
8645	GOULART, NORMA J
8651	FUSON, MICHAEL
	WOODS ELECTRIC
8665	WITT, PAUL W
8679	OCCUPANT UNKNOWN,
8693	LAW, SAM D
8821	J J & R CAFE
8829	AKIN CHIROPRACTIC OFFICE
	BRADSHAW OPTOMETRY
	LUXI SPA & SALON
	TOPS YOGURT
	UTOPIA CLEANERS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2014 (Cont'd)

8835 ANDREA CERVANTES DDS
CERVANTES, ANDREA
SHELDON GROVE FAMILY DENTAL
SMOKE IMAGE
8839 CHASONS CRAB STADIUM
8890 SENTRY STORAGE
STORAGE MINI

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

VISTA BROOK DR 2014

8472	VALDEZ, MARIO
8476	TU, CHAM K
8480	SHAFIQUE, MUHAMMAD
8484	COLEMAN, CILL
8488	BASKARAN, HARI J
8492	BIENH, KATHY L
8496	MUSHTAQ, SHAMIM M
8500	QUACH, HAN P
8504	THOMPSON, MARTY D
8508	OCCUPANT UNKNOWN,
8512	LIU, YING Y
8513	OCCUPANT UNKNOWN,
8516	GRINO, LEE A
8517	NGUYEN, LUONG H
8521	ESCALANTE, FERNANDO
8525	MATA, CYNTHIA E
8529	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2010

8400	NEWLAND DRILLING
	NEWLAND, RICHARD E
	SHELDON ROAD GROOMERS
8474	WONG, YIU
8476	OCCUPANT UNKNOWN,
8604	WORLDS FAME PET GROOMING SLN
8645	GOULART, NORMA J
8651	WOODS ELECTRIC
	WOODS, MARGUERITE C
8665	WITT, HAROLD W
8679	OCCUPANT UNKNOWN,
8693	LAW RENTAL PROPERTIES
	LAW, SAM O
8821	J J N R CAFE & DONUTS
	LAGUNA DENTAL LAB
8829	AKIN CHIROPRACTIC OFFICE
	BRADSHAW OPTOMETRY
	LUXI SPA & SALON
	UTOPIA CLEANERS
8830	LEES KOREAN MARTIAL ARTS ACAD
8835	MILK SHAKES PLUS HONEY
	SHELDON GROVE FAMILY DENTAL
	SULCAS CARPETS INC
8839	BUFFALO WILD WINGS GRILL & BAR
8890	SENTRY STORAGE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

VISTA BROOK DR 2010

8472	SANTOS, JOSEPITO A
8476	TU, CHAM K
8480	SINGH, KULDIP
8484	OCCUPANT UNKNOWN,
8492	DAMASCO, LEANDRO V
8496	SY, GEORGE L
8500	NEXT MILLENNIUM ENTERTAINMENT
	QUACH, HAN
8504	LUNA, ROSA M
8508	OCCUPANT UNKNOWN,
8512	LIU, YING
8513	OCCUPANT UNKNOWN,
8516	GRINO, ELISEO G
8517	NGUYEN, LUONG H
8521	ESCALANTE, FERNANDO
8525	CATALAN, LEON D
8529	HANG, YING

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2005

8400	NEWLAND DRILLING
	NEWLAND, NORMAN D
	SHELDON ROAD GROOMERS
8422	WOLFE, KATHY A
8437	PELTS, ROBERT A
8474	WONG, YIU
8476	DO, LONG K
8545	BRADFORD, JUSTIN W
8604	WORLDS FAME PET GROOMING SALON
8645	BOULOS, FAYEZ E
8651	WOODS ELECTRIC
	WOODS, AVERY C
8665	WITT, HAROLD W
8688	ELK GROVE RACQUET CLUB
8693	LAW, SAM
8890	BULLOCKDIVINE, TAMMY M
	SENTRY STORAGE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

VISTA BROOK DR 2005

8472	ANCHETA, MARK J
8476	ANCHETA, PATROCINIO
8480	CERVANTES, ELIAS
8484	ESTEPA, RODOLFO
8488	ARCADIAN VILLAGE BYCENTEX HOMES
	PANFEROVA, YEKATERINA
8492	DAMASCO, LEANDRO V
8496	SY, GEORGE
8500	BRITTINGHAM, MILORD C
8504	LUNA, AMELITO R
8508	SANCHEZ, MARCO A
8512	RETALLACK, ZACHORY
8516	GRINO, ELISEO G
8517	NGUYEN, LUONG H
8521	ESCALANTE, FERNANDO
8525	ESTARIJA, MARIANO B
8529	HANG, YING

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 2000

8400	NEWLAND LIVESTOCK HAULING
	OCCUPANT UNKNOWN,
8422	CALDWELL, CORA L
8434	ZHANG, S S
8437	OCCUPANT UNKNOWN,
8438	KOTRE, JOHN G
8450	DAVIS, CHARLES P
8454	HO, HINH T
8455	ABRAMS, JOSEPH O
8458	HANEY, M L
8459	CHU, LESLIE V
8462	OCCUPANT UNKNOWN,
8466	BEDELL, SHARI J
8470	BARREDO, T S
8474	WONG, YUI
8476	OCCUPANT UNKNOWN,
8478	LAU, MEI
8509	SWARTZ, GEORGE W
8513	CUCOLICHIO, A L
8519	OCCUPANT UNKNOWN,
8528	OCCUPANT UNKNOWN,
8532	NG, IRENE
8533	HUYNH, CUONG A
8536	WILLIAMS, EVONY
8537	ANDERMANN, CHARLES P
8540	BARABINO, OSCAR J
8545	OCCUPANT UNKNOWN,
8604	OCCUPANT UNKNOWN,
	WORLDS FAME PET GROOMING SALON
8645	BOULOS, FAYEZ
8651	WOODS ELECTRIC
	WOODS, AVERY C
8665	WITT, HAROLD W
8679	GRETCHEN, A M
8693	LAW, SAM
8890	BULLOCK, TAMMY M
	DIVINE, MARK E
	ELK GROVE STORAGE 1
	FEITAG, BARBARA L
	FRANCO, CYNTHIA M
	KELLY, E A
	SENTRY STORAGE
	STORAGE MINI

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 1995

8400	HUDSON, ADAM
8422	OCCUPANT UNKNOWNN
8430	OCCUPANT UNKNOWNN
8450	DAVIS, CHARLES P
8476	QUARESMA, ALCINO
8533	DOUNG, NGUYET
8545	BARNES, ALBERT H
8645	BOULOS, FAYEZ
8651	WOODS, AVERY C
8665	WITT, HAROLD
8679	MOHR, MAYNARD V
8688	ELK GROVE RACQUET CLUB
8693	LAW, SAM
8890	SENTRY STORAGE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SHELDON RD 1992

8400	HUDSON, ADAM
8476	QUARESMA, ALCINO
8645	BOULOS, FAYEZ
8665	WITT, HAROLD
8688	ELK GRV RACQUET CUB
8693	LAW, SAM
8890	ELK GRV STORAGE

Target Street	Cross Street	Source
✓	-	Haines Company

SHELDON RD 1986

8289	KUNKEL GLEN	889-6097	5
8310	CARPENTER RICHARD	682-9648	8
8320	XXXX	00	
8340	ROUTT DAVID	423-1288	3
8359	INDEP HOUSECLEANING	689-1068	4
	PULLIAM DAIL	682-8306	2
	PULLIAM RICHARD	682-8306	
8360	SMITH HERBERT	682-2282	
8365	SMITH BRIAN	689-8106	+8
	SMITH KARLA	689-6106	+8
8372	BECERRA HELIODORO C	682-9744	0
8385	XXXX	00	
8386	BROWN ROBERT J	682-2211	
8400	XXXX	00	
8430	DAVIS CHARLES P	682-2629	+8
8437	OBY HENRY	682-2014	

Target Street	Cross Street	Source
✓	-	Haines Company

SHELDON RD 1986



SHELDON RD 95624 CONT

8478	XXXX	00	
8499	XXXX	00	
8526	XXXX	00	
8604	NEWMAN NORMAN	682-2664	8
8648	BOULOS FAYEZ	688-3231	4
	BOULOS FAYEZ MRS	688-3231	
8665	WITT HAROLD S	682-2835	
8668	ELK GROVE RCCOUT CLB	686-2131	
	ELK GRV RACQUET CLB	686-2131	4
8693	LAW SAM	688-8258	6
8785	XXXX	00	
8890	ELK GRV STORAGE	682-2006	8
8901	BURKES ARABIANS	682-8837	0

Target Street	Cross Street	Source
✓	-	Haines Company

SHELDON RD 1981

8365	HUFT MARK	682-7681	+1
8372	BECERA H C	682-9744	0
8385	KACHADORIAN VAHAN	682-2937	+1
	RUEB DENNIS	682-7D00	+1
8386	BROWN ROBERT J	682-2211	6
8400	WALSH BETTY J	682-8464	0
8437	OBY HENRY	682-2014	
8476	DAVIS CHARLES P	682-2629	8
8528	FITZGERALD BENNIE	682-2488	8
	FITZGERALD PAT	682-8040	+1
8604	NEWMAN NORMAN	682-2664	8
8645	BOULOS FAYE2	682-8227	0
8665	WITT HAROLD B	682-2835	
8688	PETERSON RALPH W	682-2871	9
8693	VITONE ANTHONY	682-2398	8
8765	ALSERE2 J CRUZ	682-8024	+1
8890	ELK GROVE STORAGE	682-2006	8
8901	BURKES ARABIANS	682-8832	0
9001	VALENTE FRANK	682-2029	8
9089	THOLE DONALD	682-2588	8
9184	LEGRANDE LARRY	682-3557	D
9187	XXXX	00	

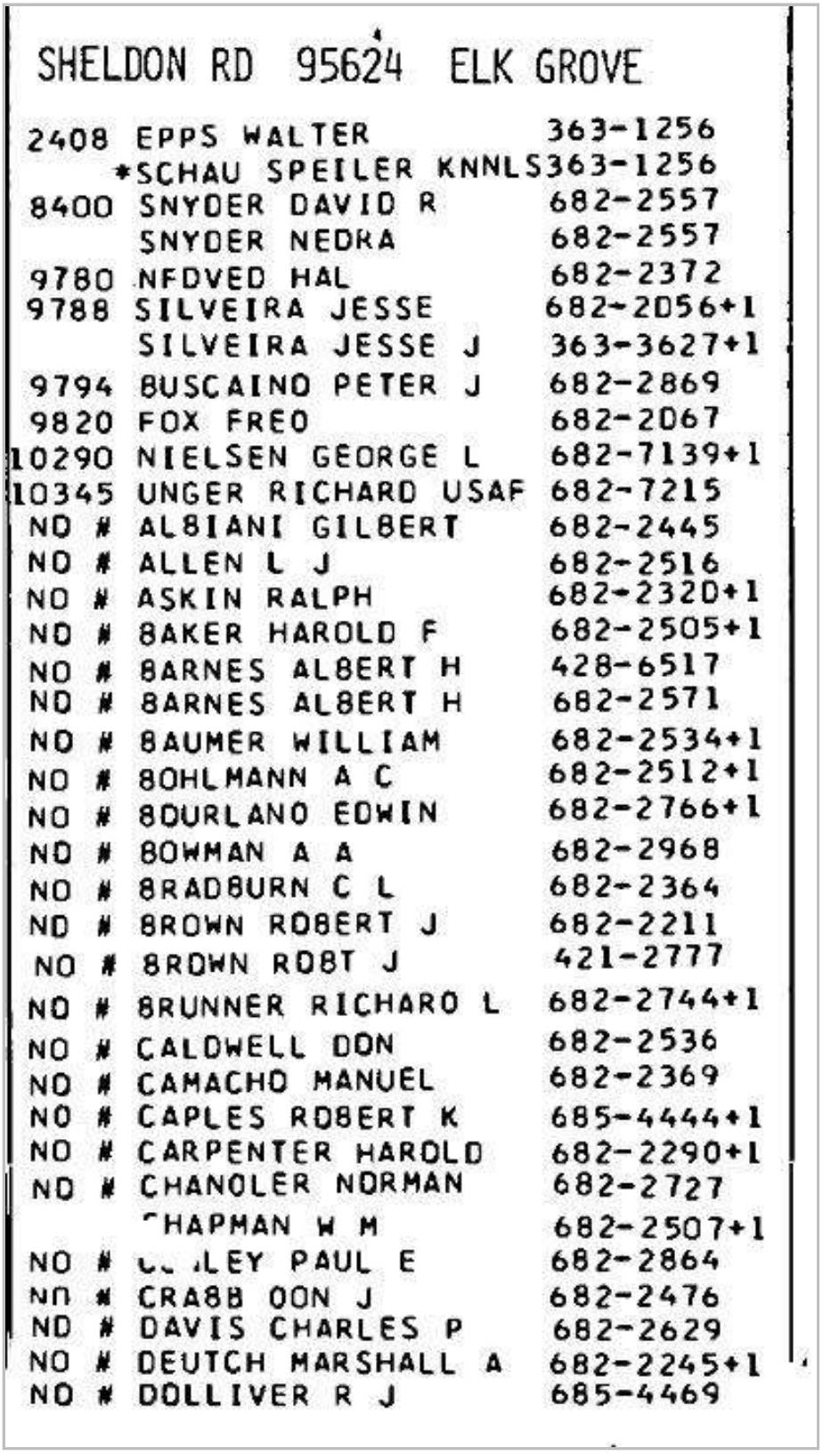
Target Street	Cross Street	Source
✓	-	Haines Company

SHELDON RD 1977

8360	SMITH HERBERT	682-2282 5
8372	SNYDER DAVID R	682-2557+7
	SNYOER NEDRA	682-2557+7
8386	BRDWN RDBERT J	682-2211 6
8400	XXXX	OD
8437	DBY HENRY	682-2014
	WEAVER JAMES G	682-3830+7
8665	WITT HARDLD	682-2835
8901	BAUMER WILLIAM	682-2531 6
	*JANIES	682-2531 3
9187	XXXX	DD
9258	HDYT BLAIR	682-3995 6
9272	DITTRICH ANDREW	682-3583+7
9350	KNEEZEL CHARLES JR	682-3997+7
9534	XXXX	DO
9549	LYKINS D S	682-2672 5
9565	ALLEN L J	682-2516 5
9600	MARTIN WARREN	682-2872 2
9610	CAVIN JOHN	682-2726 5
	*CAVINS ENGINEERING	682-3407+7
9630	BORTOLAZZO MARIO	682-9311+7

Target Street	Cross Street	Source
✓	-	Haines Company

SHELDON RD 1971



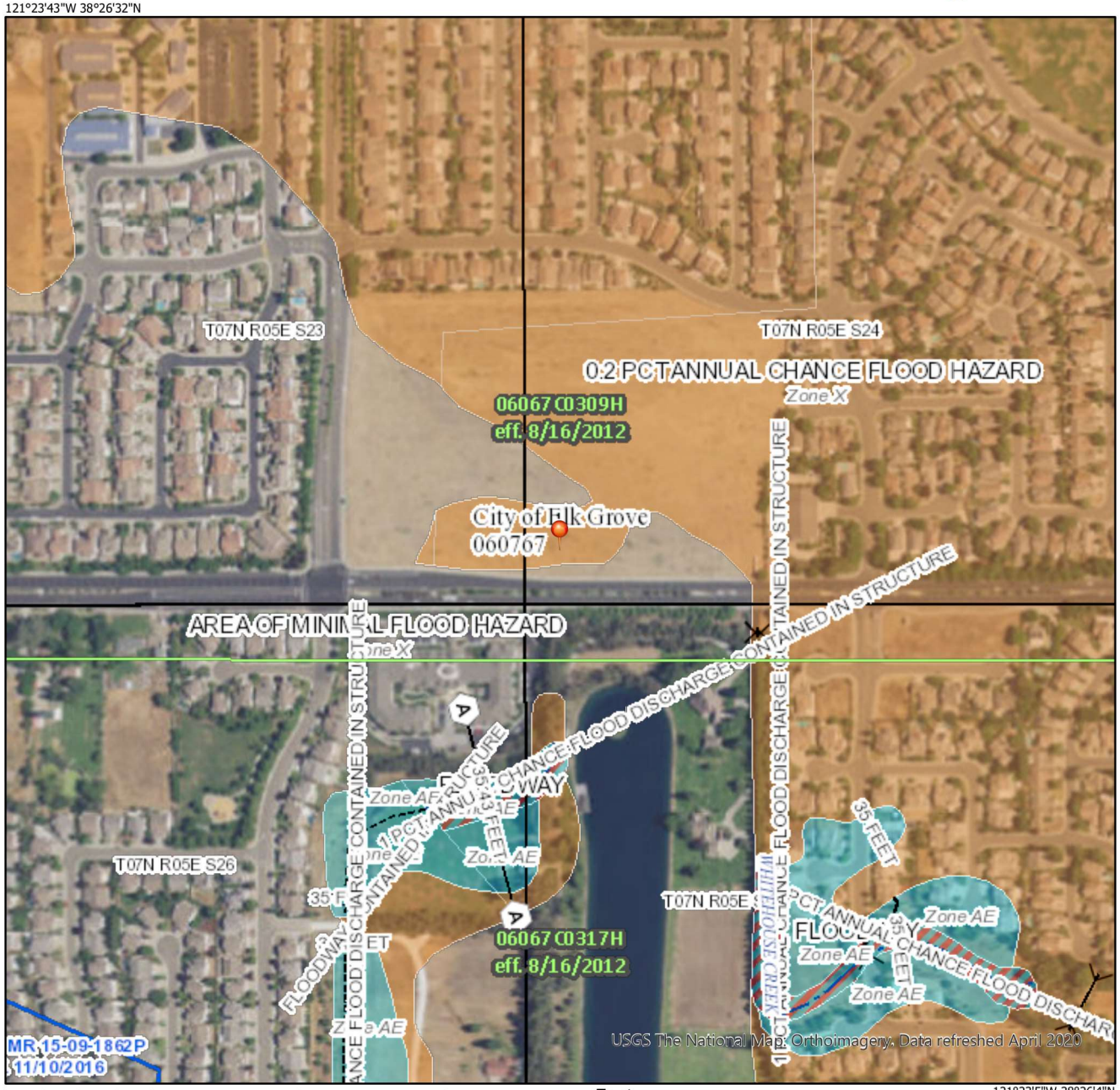
SHELDON RD 95624 ELK GROVE

2408	EPPS WALTER	363-1256
	*SCHAU SPEILER KNNLS	363-1256
8400	SNYDER DAVID R	682-2557
	SNYDER NEDRA	682-2557
9780	NEDVED HAL	682-2372
9788	SILVEIRA JESSE	682-2056+1
	SILVEIRA JESSE J	363-3627+1
9794	BUSCAINO PETER J	682-2869
9820	FOX FRED	682-2067
10290	NIELSEN GEORGE L	682-7139+1
10345	UNGER RICHARD USAF	682-7215
NO #	ALBIANI GILBERT	682-2445
NO #	ALLEN L J	682-2516
NO #	ASKIN RALPH	682-2320+1
NO #	BAKER HAROLD F	682-2505+1
NO #	BARNES ALBERT H	428-6517
NO #	BARNES ALBERT H	682-2571
NO #	BAUMER WILLIAM	682-2534+1
NO #	BOHLMANN A C	682-2512+1
NO #	BOURLAND EDWIN	682-2766+1
NO #	BOWMAN A A	682-2968
NO #	BRADBURN C L	682-2364
NO #	BROWN ROBERT J	682-2211
NO #	BROWN ROBT J	421-2777
NO #	BRUNNER RICHARD L	682-2744+1
NO #	CALDWELL DON	682-2536
NO #	CAMACHO MANUEL	682-2369
NO #	CAPLES ROBERT K	685-4444+1
NO #	CARPENTER HAROLD	682-2290+1
NO #	CHANDLER NORMAN	682-2727
	CHAPMAN W M	682-2507+1
NO #	[illegible]LEY PAUL E	682-2864
NO #	CRABB DON J	682-2476
NO #	DAVIS CHARLES P	682-2629
NO #	DEUTCH MARSHALL A	682-2245+1
NO #	DOLLIVER R J	685-4469

National Flood Hazard Layer FIRMette

FEMA

121°23'43"W 38°26'32"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

121°23'5"W 38°26'4"N

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 / 17.5 Cross Sections with 1% Annual Chance / 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 8/6/2020 at 11:57 AM 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.

APPENDIX D

EDR® Radius Map Report with Geocheck

Sheldon Grove Subdivision
Sheldon Road
Elk Grove, CA 95624

Inquiry Number: 6145801.2s
August 05, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FORM-LBC-DLU

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Map	A-16
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SHELDON ROAD
ELK GROVE, CA 95624

COORDINATES

Latitude (North):	38.4391830 - 38° 26' 21.05''
Longitude (West):	121.3900000 - 121° 23' 24.00''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	640514.3
UTM Y (Meters):	4255566.0
Elevation:	34 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5619710 FLORIN, CA
Version Date:	2012
East Map:	5629052 ELK GROVE, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140621
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
SHELDON ROAD
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
A1	VERIZON WIRELESS SHO	8545 SHELDON RD	Sacramento Co. ML	Higher	95, 0.018, ESE
A2	FIRE STATION 76	8545 SHELDON RD	Sacramento Co. ML	Higher	95, 0.018, ESE
3	CAMDEN SPRINGS RETIR	8476 SHELDON RD	Sacramento Co. ML	Lower	159, 0.030, SW
A4	MSA: SHELDON NORTH W	8568 FIREMOSS WAY	Sacramento Co. ML, CERS	Higher	217, 0.041, ESE
B5	OBIE'S DUMP	8437 SHELDON ROAD	SWF/LF, CERS	Higher	382, 0.072, WSW
B6	MATT PINO (SHELDON P	8437 SHELDON RD	HAZNET, HWTS	Higher	449, 0.085, WSW
B7	OBIE'S DUMP	8437 SHELDON ROAD	ENVIROSTOR, CPS-SLIC, VCP, LIENS	Higher	449, 0.085, WSW
C8	AT&T MOBILITY - SHEL	8398 SHELDON RD	CERS HAZ WASTE, CERS	Higher	762, 0.144, WSW
C9	AT & T MOBILITY - SH	8398 SHELDON RD	Sacramento Co. ML	Higher	762, 0.144, WSW
10	ARCADIAN VILLAGE ELE	SHELDON ROAD/POWER I	ENVIROSTOR, SCH	Lower	922, 0.175, NW
D11	SHELDON ARCO AM/PM	8361 SHELDON RD	HAZNET, HWTS	Higher	1296, 0.245, West
D12	SHELDON ARCO/GILL MO	8361 SHELDON RD	HAZNET, HWTS	Higher	1296, 0.245, West
D13	SHELDON ARCO	8361 SHELDON RD	UST	Higher	1296, 0.245, West
D14	SHELDON ARCO	8361 SHELDON RD	CERS HAZ WASTE, CERS TANKS, Sacramento Co. ML,...	Higher	1296, 0.245, West
15	RAYMOND CASE ELEMENT	8565 SHASTA LILY DR.	HAZNET, HWTS	Higher	1296, 0.245, NE
E16	CENTURY EQUIPMENT	8821 STOCKTON BLVD E	RGA LUST	Higher	1468, 0.278, West
E17	STOCKMEN SUPPLY CO	8821 E STOCKTON BLVD	Sacramento Co. CS, Sacramento Co. ML	Higher	1468, 0.278, West
E18	CENTURY EQUIPMENT	8821 STOCKTON BLVD	RGA LUST	Higher	1468, 0.278, West
E19	CENTURY EQUIPMENT	8821 STOCKTON	LUST, Cortese, HIST CORTESE, Sacramento Co. ML,...	Higher	1468, 0.278, West
20	KALWANI PROPERTY	8151 SHELDON ROAD	ENVIROSTOR, Sacramento Co. CS, VCP	Lower	4121, 0.780, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-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

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
HIST Cal-Sites..... Historical Calsites Database
CDL..... Clandestine Drug Labs
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register
PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing

HIST UST	Hazardous Substance Storage Container Database
CA FID UST	Facility Inventory Database

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
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
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
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)
HWTS	Hazardous Waste Tracking System
MINES MRDS	Mineral Resources Data 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

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.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/27/2020 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OBIE'S DUMP Facility Id: 60001365 Status: Inactive - Needs Evaluation	***8437 SHELDON ROAD***	***WSW 0 - 1/8 (0.085 mi.)***	***B7***	***21***

Lower Elevation	Address	Direction / Distance	Map ID	Page
ARCADIAN VILLAGE ELE Facility Id: 34010012 Status: No Action Required	***SHELDON ROAD/POWER I***	***NW 1/8 - 1/4 (0.175 mi.)***	***10***	***32***
KALWANI PROPERTY Facility Id: 34880001 Status: No Further Action	***8151 SHELDON ROAD***	***W 1/2 - 1 (0.780 mi.)***	***20***	***58***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OBIE'S DUMP	***8437 SHELDON ROAD***	***WSW 0 - 1/8 (0.072 mi.)***	***B5***	***14***

Database: SWF/LF (SWIS), Date of Government Version: 05/11/2020
Facility ID: 34-CR-5007
Operational Status: Closed
Regulation Status: Unpermitted

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CENTURY EQUIPMENT	***8821 STOCKTON***	***W 1/4 - 1/2 (0.278 mi.)***	***E19***	***56***

Database: LUST REG 5, Date of Government Version: 07/01/2008
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Status: Case Closed
Global Id: T0606700972

CPS-SLIC: 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.

A review of the CPS-SLIC list, as provided by EDR, has revealed that there is 1 CPS-SLIC site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OBIE'S DUMP	***8437 SHELDON ROAD***	***WSW 0 - 1/8 (0.085 mi.)***	***B7***	***21***

Database: SLIC REG 5, Date of Government Version: 04/01/2005
Database: CPS-SLIC, Date of Government Version: 05/13/2020
Facility Status: Open - Inactive
Global Id: SL0606728284

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 02/18/2020 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
STOCKMEN SUPPLY CO	***8821 E STOCKTON BLVD***	***W 1/4 - 1/2 (0.278 mi.)***	***E17***	***54***

Facility Id: RO0001087
Date Closed: 07/26/2000

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELDON ARCO Database: UST, Date of Government Version: 03/09/2020 Facility Id: FA0051108	8361 SHELDON RD	W 1/8 - 1/4 (0.245 mi.)	D13	40

State and tribal voluntary cleanup sites

VCP: 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.

A review of the VCP list, as provided by EDR, and dated 04/27/2020 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OBIE'S DUMP Status: Inactive - Needs Evaluation Facility Id: 60001365	***8437 SHELDON ROAD***	***WSW 0 - 1/8 (0.085 mi.)***	***B7***	***21***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

SCH: 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.

A review of the SCH list, as provided by EDR, and dated 04/27/2020 has revealed that there is 1 SCH site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ARCADIAN VILLAGE ELE Facility Id: 34010012	***SHELDON ROAD/POWER I***	***NW 1/8 - 1/4 (0.175 mi.)***	***10***	***32***

Status: No Action Required

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/20/2020 has revealed that there are 2 CERS HAZ WASTE sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AT&T MOBILITY - SHEL	*8398 SHELDON RD*	*WSW 1/8 - 1/4 (0.144 mi.)*	*C8*	*29*
SHELDON ARCO	*8361 SHELDON RD*	*W 1/8 - 1/4 (0.245 mi.)*	*D14*	*40*

Local Lists of Registered Storage Tanks

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 04/20/2020 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELDON ARCO	*8361 SHELDON RD*	*W 1/8 - 1/4 (0.245 mi.)*	*D14*	*40*

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 03/23/2020 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CENTURY EQUIPMENT	*8821 STOCKTON*	*W 1/4 - 1/2 (0.278 mi.)*	*E19*	*56*
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 are 4 HAZNET sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MATT PINO (SHELDON P GEPAID: CAC002617299	***8437 SHELDON RD***	***WSW 0 - 1/8 (0.085 mi.)***	***B6***	***15***
SHELDON ARCO AM/PM GEPAID: CAL000424538	***8361 SHELDON RD***	***W 1/8 - 1/4 (0.245 mi.)***	***D11***	***35***
SHELDON ARCO/GILL MO GEPAID: CAL000412813	***8361 SHELDON RD***	***W 1/8 - 1/4 (0.245 mi.)***	***D12***	***36***
RAYMOND CASE ELEMENT GEPAID: CAC002892337	***8565 SHASTA LILY DR.***	***NE 1/8 - 1/4 (0.245 mi.)***	***15***	***52***

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.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CENTURY EQUIPMENT Reg Id: 341147	***8821 STOCKTON***	***W 1/4 - 1/2 (0.278 mi.)***	***E19***	***56***

Sacramento Co. ML: Sacramento County Master List. Any business that has hazardous materials on site - hazardous materials storage sites, underground storage tanks, waste generators.

A review of the Sacramento Co. ML list, as provided by EDR, and dated 02/24/2020 has revealed that there are 6 Sacramento Co. ML sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VERIZON WIRELESS SHO	8545 SHELDON RD	ESE 0 - 1/8 (0.018 mi.)	A1	9
FIRE STATION 76	8545 SHELDON RD	ESE 0 - 1/8 (0.018 mi.)	A2	9
MSA: SHELDON NORTH W	***8568 FIREMOSS WAY***	***ESE 0 - 1/8 (0.041 mi.)***	***A4***	***10***
AT & T MOBILITY - SH	8398 SHELDON RD	WSW 1/8 - 1/4 (0.144 mi.)	C9	31
SHELDON ARCO	***8361 SHELDON RD***	***W 1/8 - 1/4 (0.245 mi.)***	***D14***	***40***
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
CAMDEN SPRINGS RETIR	8476 SHELDON RD	SW 0 - 1/8 (0.030 mi.)	3	10

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

A review of the RGA LUST list, as provided by EDR, has revealed that there are 2 RGA LUST sites

within approximately 0.5 miles of the target property.

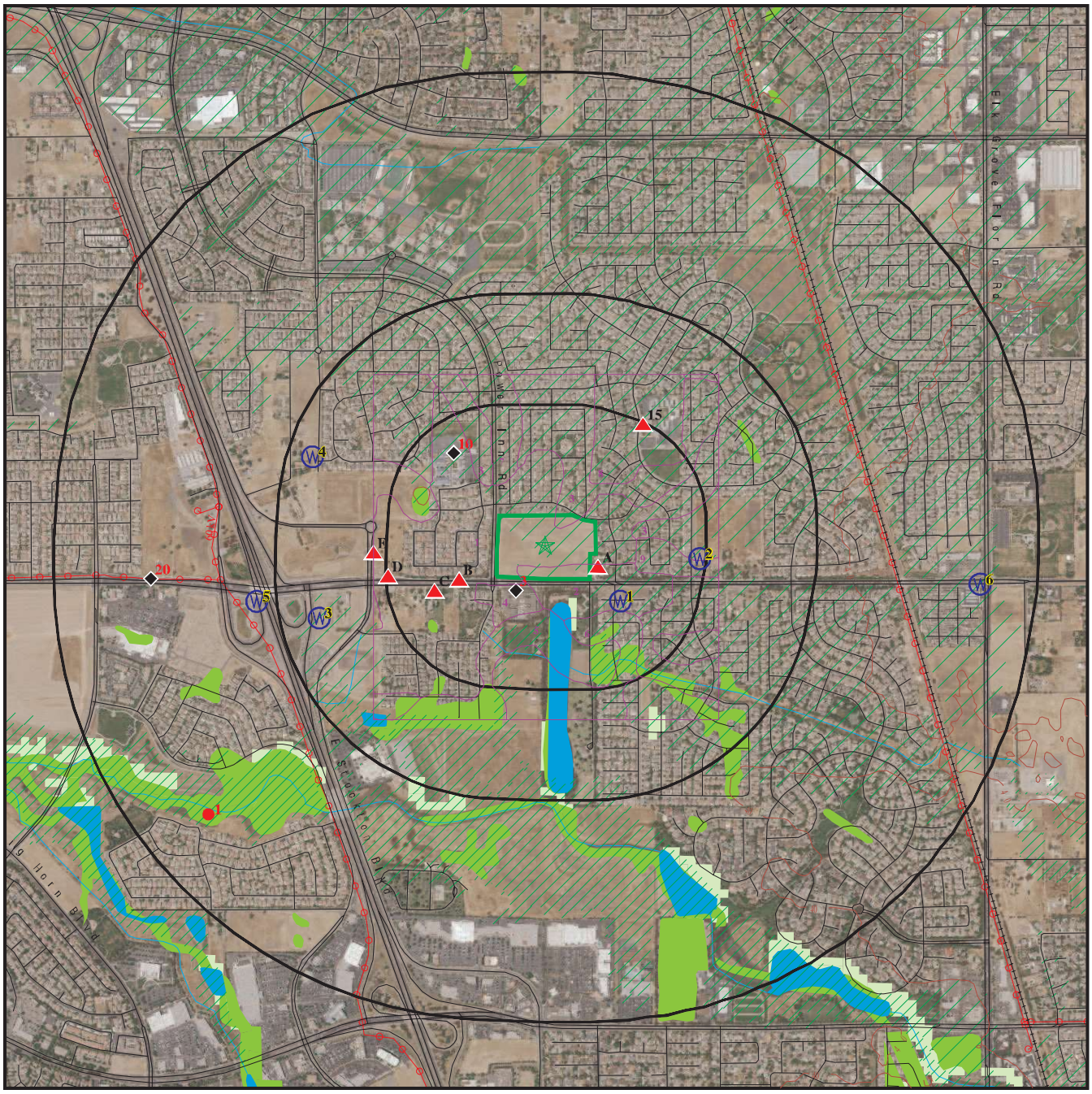
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CENTURY EQUIPMENT	8821 STOCKTON BLVD E	W 1/4 - 1/2 (0.278 mi.)	E16	53
CENTURY EQUIPMENT	8821 STOCKTON BLVD	W 1/4 - 1/2 (0.278 mi.)	E18	55

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
ELK GROVE FLORIN RD SHELDON	CIWQS
SHELDON ELK GROVE FLORIN	CIWQS
14TH AVE LANDFILL- EAST PIT	CPS-SLIC
GEORGIA-PACIFIC CHEMICAL CO	Sacramento Co. CS
PRICE CO/DWR - RETENTION POND	Sacramento Co. CS

OVERVIEW MAP - 6145801.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

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:	Sheldon Grove Subdivision	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Sheldon Road Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.439183 / 121.39	INQUIRY #:	6145801.2s
		DATE:	August 05, 2020 4:20 pm

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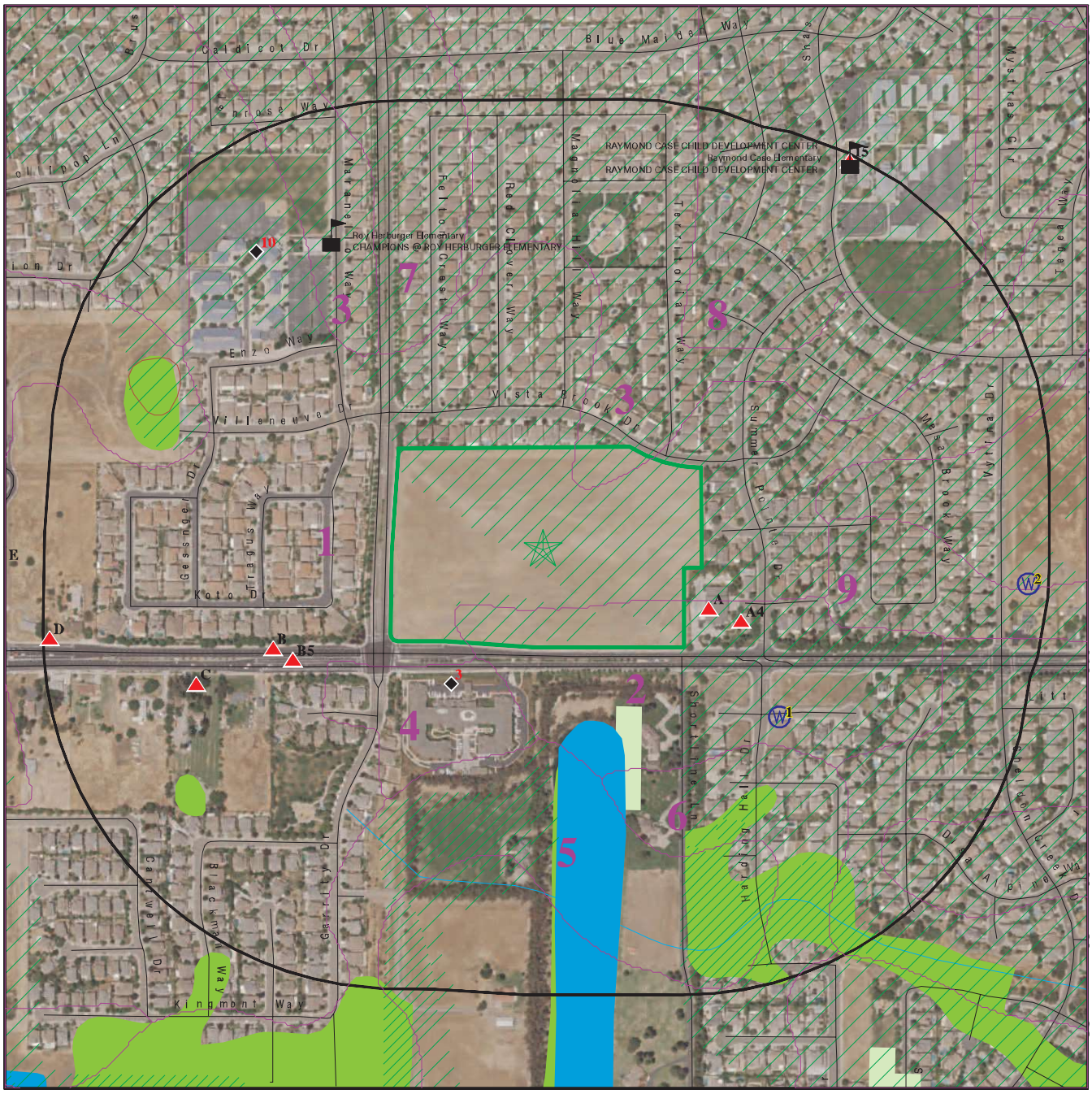
DETAIL MAP - 6145801.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

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:	Sheldon Grove Subdivision	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Sheldon Road Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.439183 / 121.39	INQUIRY #:	6145801.2s
		DATE:	August 05, 2020 4:24 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								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.250		0	0	NR	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
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
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		1	1	0	1	NR	3
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		1	0	0	NR	NR	1
State and tribal leaking storage tank lists								
LUST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		1	0	0	NR	NR	1
Sacramento Co. CS	0.500		0	0	1	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	1	NR	NR	NR	1
AST	TP		NR	NR	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		1	0	0	NR	NR	1
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	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	1	NR	NR	NR	1
CDL	TP		NR	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	2	NR	NR	NR	2
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	1	NR	NR	NR	1
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	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
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	1	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	0.250		1	3	NR	NR	NR	4
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		4	2	NR	NR	NR	6
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
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
HWTS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.250		0	0	NR	NR	NR	0
EDR Hist Cleaner	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.500		0	0	0	NR	NR	0
RGA LUST	0.500		0	0	2	NR	NR	2
- Totals --		0	9	11	6	1	0	27

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

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **VERIZON WIRELESS SHORTLINE** **Sacramento Co. ML** **S123295219**
ESE **8545 SHELDON RD** **N/A**
< 1/8 **ELK GROVE, CA 95624**
0.018 mi.
95 ft. **Site 1 of 3 in cluster A**

Relative: **Higher**
Actual: **34 ft.**

Sacramento Co. ML:

Name:	VERIZON WIRELESS SHORTLINE
Address:	8545 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Facility Id:	Not reported
Facility Status:	Not reported
FD:	Not reported
Billing Codes BP:	A
Billing Codes UST:	Not reported
WG Bill Code:	Not reported
Target Property Bill Cod:	Not reported
Food Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
Hazmat Date BP Received:	Not reported
UST Permit Dt:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Number of Tanks:	Not reported
UST Tank Test Date:	Not reported
SIC Code:	Not reported
Tier Permitting:	Not reported
AST Bill Code:	Not reported
CALARP Bill Code:	Not reported

A2 **FIRE STATION 76** **Sacramento Co. ML** **S123291112**
ESE **8545 SHELDON RD** **N/A**
< 1/8 **ELK GROVE, CA 95624**
0.018 mi.
95 ft. **Site 2 of 3 in cluster A**

Relative: **Higher**
Actual: **34 ft.**

Sacramento Co. ML:

Name:	FIRE STATION 76
Address:	8545 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Facility Id:	Not reported
Facility Status:	Not reported
FD:	Not reported
Billing Codes BP:	A
Billing Codes UST:	Not reported
WG Bill Code:	Not reported
Target Property Bill Cod:	Not reported
Food Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
Hazmat Date BP Received:	Not reported
UST Permit Dt:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Number of Tanks:	Not reported
UST Tank Test Date:	Not reported
SIC Code:	Not reported

FIRE STATION 76 (Continued) **S123291112**

Tier Permitting: Not reported
AST Bill Code: Not reported
CALARP Bill Code: Not reported

3
SW
< 1/8
0.030 mi.
159 ft.

CAMDEN SPRINGS RETIREMENT COMMUNITY
8476 SHELDON RD
ELK GROVE, CA 95624

Sacramento Co. ML **S117699590**
N/A

Relative:
Lower

Actual:
33 ft.

Sacramento Co. ML:
Name: CAMDEN SPRINGS RETIREMENT COMMUNITY
Address: 8476 SHELDON RD
City,State,Zip: ELK GROVE, CA 95624
Facility Id: Not reported
Facility Status: Not reported
FD: Not reported
Billing Codes BP: A
Billing Codes UST: Not reported
WG Bill Code: Not reported
Target Property Bill Cod: Not reported
Food Bill Code: Not reported
CUPA Permit Date: Not reported
HAZMAT Permit Date: Not reported
HAZMAT Inspection Date: Not reported
Hazmat Date BP Received: Not reported
UST Permit Dt: Not reported
UST Inspection Date: Not reported
UST Tank Test Date: Not reported
Number of Tanks: Not reported
UST Tank Test Date: Not reported
SIC Code: Not reported
Tier Permitting: Not reported
AST Bill Code: Not reported
CALARP Bill Code: Not reported

A4
ESE
< 1/8
0.041 mi.
217 ft.

MSA: SHELDON NORTH WELL (W65)
8568 FIREMOSS WAY
ELK GROVE, CA 95624

Site 3 of 3 in cluster A

Sacramento Co. ML **S110819270**
CERS **N/A**

Relative:
Higher

Actual:
34 ft.

Sacramento Co. ML:
Name: MSA: SHELDON NORTH WELL (W65)
Address: 8568 FIREMOSS WAY
City,State,Zip: ELK GROVE, CA 95624
Facility Id: Not reported
Facility Status: Not reported
FD: Not reported
Billing Codes BP: A
Billing Codes UST: Not reported
WG Bill Code: Not reported
Target Property Bill Cod: Not reported
Food Bill Code: Not reported
CUPA Permit Date: Not reported
HAZMAT Permit Date: Not reported

MSA: SHELDON NORTH WELL (W65) (Continued) **S110819270**

HAZMAT Inspection Date:	Not reported
Hazmat Date BP Received:	Not reported
UST Permit Dt:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Number of Tanks:	Not reported
UST Tank Test Date:	Not reported
SIC Code:	Not reported
Tier Permitting:	Not reported
AST Bill Code:	Not reported
CALARP Bill Code:	I

CERS:

Name:	MSA: SHELDON NORTH WELL (W65)
Address:	8568 FIREMOSS WAY
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	50535
CERS ID:	10220701
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-12-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	OBSERVATION/ GUIDANCE - WELL REHABILITATION. Water purveyors that rehabilitate wells, may use hazardous materials that can create effluent waste. This effluent waste may be hazardous. As a generator of this waste, water purveyors are required by law to make a proper waste determination. To make this determination the water purveyor must characterize their waste. For specifics, reference the attached Bulletin dated 2/19/2014. If additional information is required contact this department. HAZARDOUS MATERIALS BUSINESS PLAN NOTIFICATION FOR: ALL FACILITIES. This is an announcement for all Sacramento County located facilities: Any NEW facilities or sites must be registered in the State system for hazardous materials business plans (California Environmental Reporting System - CERS). If already registered in CERS, disregard this announcement. OR For current plans previously submitted in Sacramento County's Portal system, facilities may make updates or corrections [Truncated]
Eval Division:	Sacramento County Env Management Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-18-2018
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	No violations observed at time of inspection. Note*: Tank capacity has not been accurately submitted to this department through CERS, upon the next annual submission change the largest container sizes for the appropriate chemical inventory's to the correct storage capacity of the tanks versus the max fill amounts utilized.
Eval Division:	Sacramento County Env Management Department
Eval Program:	HMRRP
Eval Source:	CERS

MSA: SHELDON NORTH WELL (W65) (Continued) **S110819270**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	08-12-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Duplicate OBSERVATION/ GUIDANCE - RE: WELL REHABILITATION. Water purveyors that rehabilitate wells, may use hazardous materials that can create effluent waste. This effluent waste may be hazardous. As a generator of this waste, water purveyors are required by law to make a proper waste determination. To make this determination the water purveyor must characterize their waste. For specifics, reference the attached Bulletin dated 2/19/2014. If additional information is required contact this department. HAZARDOUS MATERIALS BUSINESS PLAN NOTIFICATION FOR: ALL FACILITIES. This is an announcement for all Sacramento County located facilities: Any NEW facilities or sites must be registered in the State system for hazardous materials business plans (California Environmental Reporting System - CERS). If already registered in CERS, disregard this announcement. OR For current plans previously submitted in Sacramento County's Portal system, facilities may make updates or [Truncated]
Eval Division:	Sacramento County Env Management Department
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	50535
Facility Name:	MSA: SHELDON NORTH WELL (W65)
Env Int Type Code:	HMBP
Program ID:	10220701
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	38.438410
Longitude:	-121.387370

Affiliation:

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	10151 FLORIN ROAD
Affiliation City:	SACRAMENTO
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95829
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Forrest Williams
Entity Title:	SENIOR CIVIL ENGINEER
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	SACRAMENTO COUNTY WATER AGENCY

MSA: SHELDON NORTH WELL (W65) (Continued) **S110819270**

Entity Title:	Not reported
Affiliation Address:	827 7TH ST RM 301
Affiliation City:	SACRAMENTO
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95814
Affiliation Phone:	(916) 874-6851
Affiliation Type Desc:	CUPA District
Entity Name:	Sacramento County Environmental Management Departm
Entity Title:	Not reported
Affiliation Address:	10590 Armstrong Avenue, Suite A
Affiliation City:	Sacramento
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95655
Affiliation Phone:	(916) 875-8550
Affiliation Type Desc:	Environmental Contact
Entity Name:	Aaron Wyley
Entity Title:	Not reported
Affiliation Address:	10151 Florin Rd
Affiliation City:	Sacramento
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95829
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	SACRAMENTO COUNTY WATER AGENCY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Document Preparer
Entity Name:	AARON WYLEY
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	SACRAMENTO COUNTY WATER AGENCY
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:	(916) 874-6851

B5 **OBIE'S DUMP** **SWF/LF** **S105964602**
WSW **8437 SHELDON ROAD** **CERS** **N/A**
< 1/8 **SACRAMENTO, CA 95838**
0.072 mi.
382 ft. **Site 1 of 3 in cluster B**

Relative:
Higher

Actual:
35 ft.

SWF/LF (SWIS):

Name:	OBIE'S DUMP
Address:	8437 SHELDON ROAD
City,State,Zip:	SACRAMENTO, CA
Facility ID:	34-CR-5007
Lat/Long:	38.44083 / -121.39556
Owner Name:	Pino J & M
Owner Telephone:	9166822847
Owner Address:	Not reported
Owner Address2:	7714 Bradshaw Road
Owner City,St,Zip:	Sacramento, CA 95829
Operational Status:	Closed
Operator:	Pino J & M
Operator Phone:	9166822847
Operator Address:	Not reported
Operator Address2:	7714 Bradshaw Road
Operator City,St,Zip:	Sacramento, CA 95829
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	$0.00
Activity:	Solid Waste Disposal Site
Regulation Status:	Unpermitted
Landuse Name:	Residential,Open Space - Irrigated
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	None
Accepted Waste:	Not reported
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	$0.00
SWIS Num:	34-CR-5007
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Not reported
Lat/Long:	38.44083 / -121.39556

CERS:

Name:	OBIE'S DUMP
Address:	8437 SHELDON ROAD
City,State,Zip:	SACRAMENTO, CA
Site ID:	510595
CERS ID:	34-CR-5007
CERS Description:	Solid Waste and Recycle Sites

Affiliation:

Affiliation Type Desc:	Legal Operator
Entity Name:	Pino J & M
Entity Title:	Not reported

OBIE'S DUMP (Continued) **S105964602**

Affiliation Address:	Not reported
Affiliation City:	Sacramento
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95829
Affiliation Phone:	9166822847
Affiliation Type Desc:	Legal Owner
Entity Name:	Pino J & M
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Sacramento
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95829
Affiliation Phone:	9166822847
Name:	OBIE'S DUMP
Address:	8437 SHELDON ROAD
City,State,Zip:	SACRAMENTO, CA 95838
Site ID:	483973
CERS ID:	110013984153
CERS Description:	US EPA Air Emission Inventory System (EIS)

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	JAMES L TJOSVOLD DEPT OF TOXIC SUBSTANCES
Entity Title:	Not reported
Affiliation Address:	8800 CAL CENTER DRIVE
Affiliation City:	SACRAMENTO
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	ZZZ CTRL VLY RWQCB REGN 5S
Entity Title:	Not reported
Affiliation Address:	11020 SUN CENTER DRIVE 200
Affiliation City:	RANCHOCORDOVA
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B6 **MATT PINO (SHELDON PARK)** **HAZNET S112961841**
WSW **8437 SHELDON RD** **HWTS N/A**
< 1/8 **ELK GROVE, CA 95624**
0.085 mi.
449 ft. **Site 2 of 3 in cluster B**

Relative:
Higher

Actual:
35 ft.

HAZNET:

Name:	MATT PINO (SHELDON PARK)
Address:	8437 SHELDON RD
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 956244089

MATT PINO (SHELDON PARK) (Continued) **S112961841**

Contact:	MATT PINO/OWNER'S SON
Telephone:	9164166216
Mailing Name:	Not reported
Mailing Address:	8589 FLORIN RD
Year:	2007
Gepaid:	CAC002617299
TSD EPA ID:	CAT000646117
CA Waste Code:	611 - Contaminated soil from site clean-up
Disposal Method:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	2315.16

Additional Info:

Year:	2007
Gen EPA ID:	CAC002617299
Shipment Date:	20071118
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585003JJK
Trans EPA ID:	CAR000175844
Trans Name:	ROSAS TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585046JJK
Trans EPA ID:	CAR000073411
Trans Name:	MARZETT TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported

MATT PINO (SHELDON PARK) (Continued) **S112961841**

Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:31:13
Receipt Date:	20071115
Manifest ID:	003579441JJK
Trans EPA ID:	CAR000178590
Trans Name:	JAVIER PADILLA TRKG
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:31:13
Receipt Date:	20071115
Manifest ID:	003579439JJK
Trans EPA ID:	CAR000186478
Trans Name:	J & L TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported

MATT PINO (SHELDON PARK) (Continued) **S112961841**

Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20071115
Creation Date:	1/25/2008 18:31:13
Receipt Date:	20071115
Manifest ID:	003579440JJK
Trans EPA ID:	CAR000178749
Trans Name:	SY TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585045JJK
Trans EPA ID:	CAR000174649
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115

MATT PINO (SHELDON PARK) (Continued) **S112961841**

Manifest ID:	003585044JJK
Trans EPA ID:	CAR000178434
Trans Name:	D J TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585043JJK
Trans EPA ID:	CAR000178475
Trans Name:	SIF TRUCKING
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585042JJK
Trans EPA ID:	CAD982513632
Trans Name:	DENBESTE TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT

MATT PINO (SHELDON PARK) (Continued) **S112961841**

TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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
Shipment Date:	20071115
Creation Date:	1/25/2008 18:30:59
Receipt Date:	20071115
Manifest ID:	003585041JJK
Trans EPA ID:	CAD982513632
Trans Name:	DENBESTE TRANSPORTATION
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT000646117
Trans Name:	CHEMICAL WASTE MANAGEMENT
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	611 - Contaminated soil from site clean-ups
RCRA Code:	Not reported
Meth Code:	H132 - Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Quantity Tons:	21.24
Waste Quantity:	18
Quantity Unit:	Y
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:	MATT PINO (SHELDON PARK)
Address:	8437 SHELDON RD
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 956244089
EPA ID:	CAC002617299
Inactive Date:	12/02/2007
Create Date:	06/04/2007
Last Act Date:	12/19/2007
Mailing Name:	Not reported
Mailing Address:	8589 FLORIN RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	SACRAMENTO, CA 95828
Owner Name:	MARJORIE PINO
Owner Address:	8589 FLORIN RD
Owner Address 2:	Not reported
Owner City,State,Zip:	SACRAMENTO, CA 95828

MATT PINO (SHELDON PARK) (Continued) **S112961841**

Contact Name: MATT PINO/OWNER'S SON
Contact Address: 8589 FLORIN RD
Contact Address 2: Not reported
City,State,Zip: SACRAMENTO, CA 95828

B7 **OBIE'S DUMP** **ENVIROSTOR** **S106707862**
WSW **8437 SHELDON ROAD** **CPS-SLIC** **N/A**
< 1/8 **ELK GROVE, CA 95624** **VCP**
0.085 mi. **LIENS**
449 ft. **Site 3 of 3 in cluster B**

Relative: **Higher**
Actual: **35 ft.**

ENVIROSTOR:
Name: OBIE'S DUMP
Address: 8437 SHELDON ROAD
City,State,Zip: ELK GROVE, CA 95624
Facility ID: 60001365
Status: Inactive - Needs Evaluation
Status Date: 11/24/2014
Site Code: 101726
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 1.5
NPL: NO
Regulatory Agencies: SMBRP, IWMB, SACRAMENTO COUNTY
Lead Agency: SMBRP
Program Manager: Mckinley Lewis Jr.
Supervisor: William Beckman
Division Branch: Cleanup Sacramento
Assembly: 09
Senate: 06
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.44098
Longitude: -121.3960
APN: NONE SPECIFIED
Past Use: LDF, LANDFILL - CONSTRUCTION
Potential COC: Lead
Confirmed COC: Lead
Potential Description: OTH, SOIL
Alias Name: SL0606728284
Alias Type: GeoTracker Global ID
Alias Name: 101726
Alias Type: Project Code (Site Code)
Alias Name: 60001365
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Litigation Support
Completed Date: 08/12/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement

OBIE'S DUMP (Continued) **S106707862**

Completed Date: 09/13/2004
Comments: Agreement signed by property owner.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 04/28/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 02/23/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement Termination Notification
Completed Date: 01/25/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 09/01/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 04/08/2004
Comments: Completed application.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/09/2012
Comments: Report received. No response letter sent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 12/16/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 03/14/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Lien
Completed Date: 10/09/2013
Comments: Not reported

OBIE'S DUMP (Continued) **S106707862**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	05/30/2012
Comments:	Third and final demand letter.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	03/04/2004
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Form 1479 - Site and Collections Summary
Completed Date:	12/13/2013
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Post HARP Form
Completed Date:	11/18/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Pre-HARP Form
Completed Date:	08/18/2014
Comments:	Signed Pre-HARP.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/15/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	12/04/2014
Comments:	Mr. Pino is notified of our decision to update the property's status to "Inactive-Action Required".
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	11/21/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	11/21/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported

OBIE'S DUMP (Continued) **S106707862**

Completed Document Type: Triage Meeting
Completed Date: 05/17/2016
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 04/16/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 09/12/2018
Comments: 2nd demand letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 08/06/2018
Comments: 2018 Collection letter #1

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

SLIC REG 5:
Name: Obie's Dump**
Address: 8437 Sheldon Rd
City: Elk Grove
Region: 5
Facility Status: Preliminary Assessment
Unit: Facility is a Spill or site
Pollutant: Pb, Zn
Lead Agency: DTSC
Date Filed: 08/24/04
Report Date: / /
Date Added: 10/13/2004
Date Closed: Not reported

CPS-SLIC:
Name: OBIE'S DUMP
Address: 8437 SHELDON ROAD
City,State,Zip: ELK GROVE, CA
Region: STATE
Facility Status: **Open - Inactive**
Status Date: 09/02/2004
Global Id: SL0606728284
Lead Agency: DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Lead Agency Case Number: 60001365

OBIE'S DUMP (Continued) **S106707862**

Latitude:	38.438102
Longitude:	-121.393418
Case Type:	Cleanup Program Site
Case Worker:	JLT
Local Agency:	DEPARTMENT OF TOXIC SUBSTANCES CONTROL
RB Case Number:	Not reported
File Location:	Not reported
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Lead
Site History:	DTSC is lead agency. Trenching and sampling was conducted and reported in 2003. The results show lead is above screening levels in soil.

Click here to access the California GeoTracker records for this facility:

VCP:

Name:	OBIE'S DUMP
Address:	8437 SHELDON ROAD
City,State,Zip:	ELK GROVE, CA 95624
Facility ID:	60001365
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP, IWMB, SACRAMENTO COUNTY
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Mckinley Lewis Jr.
Supervisor:	William Beckman
Division Branch:	Cleanup Sacramento
Site Code:	101726
Assembly:	09
Senate:	06
Special Programs Code:	Voluntary Cleanup Program
Status:	Inactive - Needs Evaluation
Status Date:	11/24/2014
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	38.44098 / -121.3960
APN:	NONE SPECIFIED
Past Use:	LDF, LANDFILL - CONSTRUCTION
Potential COC:	30013
Confirmed COC:	30013
Potential Description:	OTH, SOIL
Alias Name:	SL0606728284
Alias Type:	GeoTracker Global ID
Alias Name:	101726
Alias Type:	Project Code (Site Code)
Alias Name:	60001365
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Litigation Support
Completed Date:	08/12/2013

OBIE'S DUMP (Continued) **S106707862**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 09/13/2004
Comments: Agreement signed by property owner.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 04/28/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 02/23/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement Termination Notification
Completed Date: 01/25/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 09/01/2006
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Application
Completed Date: 04/08/2004
Comments: Completed application.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 11/09/2012
Comments: Report received. No response letter sent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 12/16/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 03/14/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE

OBIE'S DUMP (Continued) **S106707862**

Completed Sub Area Name: Not reported
Completed Document Type: Lien
Completed Date: 10/09/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Letter - Demand
Completed Date: 05/30/2012
Comments: Third and final demand letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/04/2004
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Form 1479 - Site and Collections Summary
Completed Date: 12/13/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Post HARP Form
Completed Date: 11/18/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pre-HARP Form
Completed Date: 08/18/2014
Comments: Signed Pre-HARP.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/15/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/04/2014
Comments: Mr. Pino is notified of our decision to update the property's status to "Inactive-Action Required".

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/21/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence

OBIE'S DUMP (Continued) **S106707862**

Completed Date:	11/21/2014
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Triage Meeting
Completed Date:	05/17/2016
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	04/16/2019
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	09/12/2018
Comments:	2nd demand letter.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Letter - Demand
Completed Date:	08/06/2018
Comments:	2018 Collection letter #1
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

LIENS:

Name:	OBIE'S DUMP
City,State,Zip:	ELK GROVE, CA 95624
Envirostor Id:	60001365
Latitude:	38.440985
Longitude:	-121.39609
Project Mgr:	MCKINLEY LEWIS JR.
Project Code:	101726
If Satisfied:	NO
Date Satisfied:	Not reported
Site Status:	INACTIVE - NEEDS EVALUATION
Site Type:	VOLUNTARY CLEANUP
Completed:	10/09/2013
Lien Amount:	$21,887.54
Amount Remaining:	Not reported
APNS:	Not reported
Description:	The Obie's Dump (Site) includes a portion of the property located at Sheldon Road, Elk Grove, Sacramento County, California 95624. The approximate1.5 acre portion of the property was once an excavated area used as a "borrow site", landfill and burn dump known as Obie's

OBIE'S DUMP (Continued) **S106707862**

Dump. The area is now a crescent shaped depression along the east boundary of the property. In a letter dated March 21, 1992, the SCEHD identified that the site was in noncompliance of the Mitigation Monltorinq and Reporting Program. The SCEHD as the Local Enforcement Agency (LEA) is responsible for solid waste permitting, inspection, enforcement and the regulation of closed disposal sites. In subsequent complaints of illegal dumping of debris and household waste, the LEA inspected and issued a Notice of Violation to the property owner. At the request of the property owner and in anticipation of future development of the property, LEA staff agreed to provide regulatory oversight and guidance of the proposed Site investigation. With this oversight, the property owner completed an investigation work plan and conducted soil trenching and sampling. The results of the Site investigation are reported in the May 12, 2003, Landfill Characterization and Environmental Sampling Report. The results show that there is lead in soils above the California Code of Regulations Total Threshold Limit Concentration which defines a toxic characteristic hazardous waste.

C8 **AT&T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID** **CERS HAZ WASTE** **S121769195**
WSW **8398 SHELDON RD** **CERS** **N/A**
1/8-1/4 **ELK GROVE, CA 95624**
0.144 mi.
762 ft. **Site 1 of 2 in cluster C**

Relative:
Higher

Actual:
35 ft.

CERS HAZ WASTE:

Name:	AT&T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID134337)
Address:	8398 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	372236
CERS ID:	10674955
CERS Description:	Hazardous Waste Generator

CERS:

Name:	AT&T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID134337)
Address:	8398 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	372236
CERS ID:	10674955
CERS Description:	Chemical Storage Facilities

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	05-10-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	No violations were observed during the time of inspection. If you have any questions, you are welcome to contact Monica Boatright at boatrightm@saccounty.net or 916-875-8476.
Eval Division:	Sacramento County Env Management Department
Eval Program:	HMRRP
Eval Source:	CERS

Coordinates:

Site ID:	372236
Facility Name:	AT&T Mobility - SHELDON RD & E STOCKTON BLVD (USID134337)
Env Int Type Code:	HMBP

AT&T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID134337) (Continued) **S121769195**

Program ID:	10674955
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	38.437150
Longitude:	-121.394600

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Peter Burnell, Sigma Consultants, Inc.
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75202
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Jeremy McGrue
Entity Title:	National EPCRA Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	AT&T Mobility
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:	(800) 566-9347

Affiliation Type Desc:	CUPA District
Entity Name:	Sacramento County Environmental Management Departm
Entity Title:	Not reported
Affiliation Address:	10590 Armstrong Avenue, Suite A
Affiliation City:	Sacramento
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95655
Affiliation Phone:	(916) 875-8550

AT&T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID134337) (Continued) **S121769195**

Affiliation Type Desc:	Environmental Contact
Entity Name:	AT&T EH&S Hotline - Option #1
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75202
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	New Cingular Wireless PCS, LLC dba AT&T Mobility
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75202
Affiliation Phone:	(214) 464-1712

Affiliation Type Desc:	Parent Corporation
Entity Name:	AT&T Mobility
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

C9 **AT & T MOBILITY - SHELDON RD & E STOCKTON BLVD (US** **Sacramento Co. ML** **S120761154**
WSW **8398 SHELDON RD** **N/A**
1/8-1/4 **ELK GROVE, CA 95624**
0.144 mi.
762 ft. **Site 2 of 2 in cluster C**

Relative: **Higher**
Actual: **35 ft.**

Sacramento Co. ML:

Name:	AT & T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID 134337)
Address:	8398 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Facility Id:	Not reported
Facility Status:	Not reported
FD:	Not reported
Billing Codes BP:	A
Billing Codes UST:	Not reported
WG Bill Code:	Not reported
Target Property Bill Cod:	Not reported
Food Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
Hazmat Date BP Received:	Not reported
UST Permit Dt:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Number of Tanks:	Not reported
UST Tank Test Date:	Not reported

AT & T MOBILITY - SHELDON RD & E STOCKTON BLVD (USID 134337) (Continued) **S120761154**

SIC Code: Not reported
Tier Permitting: Not reported
AST Bill Code: Not reported
CALARP Bill Code: Not reported

10
NW
1/8-1/4
0.175 mi.
922 ft.

ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE **ENVIROSTOR** **S118756770**
SHELDON ROAD/POWER INN ROAD **SCH** **N/A**
ELK GROVE, CA 95624

Relative:
Lower

Actual:
33 ft.

ENVIROSTOR:
Name: ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE
Address: SHELDON ROAD/POWER INN ROAD
City,State,Zip: ELK GROVE, CA 95624
Facility ID: 34010012
Status: No Action Required
Status Date: 11/16/2001
Site Code: 104239
Site Type: School Investigation
Site Type Detailed: School
Acres: 11
NPL: NO
Regulatory Agencies: DTSC
Lead Agency: DTSC
Program Manager: Not reported
Supervisor: Jose Salcedo
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: 38.44226
Longitude: -121.3938
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: NONE SPECIFIED No Contaminants found
Confirmed COC: NONE SPECIFIED
Potential Description: NMA
Alias Name: ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE
Alias Type: Alternate Name
Alias Name: ELK GROVE UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: ELK GROVE USD-ARCADIAN VILLAGE ELEM
Alias Type: Alternate Name
Alias Name: 104239
Alias Type: Project Code (Site Code)
Alias Name: 34010012
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: 11/16/2001
Comments: Not reported

ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE (Continued) **S118756770**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/16/2001
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	11/16/2001
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Initial Study/ Mitigated Neg. Dec. (MND)
Completed Date:	05/02/2002
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SCH:

Name:	ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE
Address:	SHELDON ROAD/POWER INN ROAD
City,State,Zip:	ELK GROVE, CA 95624
Facility ID:	34010012
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	11
National Priorities List:	NO
Cleanup Oversight Agencies:	DTSC
Lead Agency:	DTSC
Lead Agency Description:	* DTSC
Project Manager:	Not reported
Supervisor:	Jose Salcedo
Division Branch:	Northern California Schools & Santa Susana
Site Code:	104239
Assembly:	09
Senate:	06
Special Program Status:	Not reported
Status:	No Action Required
Status Date:	11/16/2001
Restricted Use:	NO
Funding:	School District
Latitude:	38.44226
Longitude:	-121.3938
APN:	NONE SPECIFIED
Past Use:	AGRICULTURAL - ROW CROPS

ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE (Continued) **S118756770**

Potential COC:	NONE SPECIFIED, No Contaminants found
Confirmed COC:	NONE SPECIFIED
Potential Description:	NMA
Alias Name:	ARCADIAN VILLAGE ELEMENTARY SCHOOL SITE
Alias Type:	Alternate Name
Alias Name:	ELK GROVE UNIFIED SCHOOL DISTRICT
Alias Type:	Alternate Name
Alias Name:	ELK GROVE USD-ARCADIAN VILLAGE ELEM
Alias Type:	Alternate Name
Alias Name:	104239
Alias Type:	Project Code (Site Code)
Alias Name:	34010012
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:	11/16/2001
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	11/16/2001
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Inspections/Visit (Non LUR)
Completed Date:	11/16/2001
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Initial Study/ Mitigated Neg. Dec. (MND)
Completed Date:	05/02/2002
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

D11 **SHELDON ARCO AM/PM** **HAZNET** **S123635210**
West **8361 SHELDON RD** **HWTS** **N/A**
1/8-1/4 **ELK GROVE, CA 95624**
0.245 mi.
1296 ft. **Site 1 of 4 in cluster D**

Relative:
Higher

Actual:
35 ft.

HAZNET:

Name:	SHELDON ARCO AM/PM
Address:	8361 SHELDON RD
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624
Contact:	CHRIS MOORE
Telephone:	9167149323
Mailing Name:	Not reported
Mailing Address:	8355 SHELDON RD
Year:	2018
Gepaid:	CAL000424538
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.41700
Year:	2017
Gepaid:	CAL000424538
TSD EPA ID:	CAT080013352
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.136

Additional Info:

Year:	2017
Gen EPA ID:	CAL000424538
Shipment Date:	20171214
Creation Date:	8/3/2018 18:30:42
Receipt Date:	20171226
Manifest ID:	018240618JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.136
Waste Quantity:	40
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported

SHELDON ARCO AM/PM (Continued) **S123635210**

Additional Code 4: Not reported
Additional Code 5: Not reported

HWTS:
Name: SHELDON ARCO AM/PM
Address: 8361 SHELDON RD
Address 2: Not reported
City,State,Zip: ELK GROVE, CA 95624
EPA ID: CAL000424538
Inactive Date: 06/30/2017
Create Date: 01/30/2017
Last Act Date: 12/04/2017
Mailing Name: Not reported
Mailing Address: 8355 SHELDON RD
Mailing Address 2: Not reported
Mailing City,State,Zip: ELK GROVE, CA 95624
Owner Name: GIL MOORE OIL COMPANY
Owner Address: 8355 SHELDON RD
Owner Address 2: Not reported
Owner City,State,Zip: ELK GROVE, CA 95624
Contact Name: CHRIS MOORE
Contact Address: 8355 SHELDON RD
Contact Address 2: Not reported
City,State,Zip: ELK GROVE, CA 95624

NAICS:
EPA ID: CAL000424538
Create Date: 2017-01-30 15:32:40
NAICS Code: 44719
NAICS Description: Other Gasoline Stations
Issued EPA ID Date: 2017-01-30 15:32:40
Inactive Date: 2017-06-30 00:00:00
Facility Name: SHELDON ARCO AM/PM
Facility Address: 8361 SHELDON RD
Facility Address 2: Not reported
Facility City: ELK GROVE
Facility County: 34
Facility State: CA
Facility Zip: 95624

D12 **SHELDON ARCO/GILL MOORE OIL COMPANY** **HAZNET** **S123633785**
West **8361 SHELDON RD** **HWTS** **N/A**
1/8-1/4 **ELK GROVE, CA 95624**
0.245 mi.
1296 ft. **Site 2 of 4 in cluster D**

Relative:
Higher

Actual:
35 ft.

HAZNET:
Name: SHELDON ARCO/GILL MOORE OIL COMPANY
Address: 8361 SHELDON RD
Address 2: Not reported
City,State,Zip: ELK GROVE, CA 956240000
Contact: CHRIS MOORE
Telephone: 9167184642
Mailing Name: Not reported
Mailing Address: 8355 SHELDON ROAD

Year: 2019

SHELDON ARCO/GILL MOORE OIL COMPANY (Continued) **S123633785**

Gepaid:	CAL000412813
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.62550
Year:	2019
Gepaid:	CAL000412813
TSD EPA ID:	AZR000521146
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.25000
Year:	2018
Gepaid:	CAL000412813
TSD EPA ID:	AZR000515924
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.08750
Year:	2018
Gepaid:	CAL000412813
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.20850
Year:	2017
Gepaid:	CAL000412813
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.2085
Year:	2016
Gepaid:	CAL000412813
TSD EPA ID:	AZR000175422
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0925
Year:	2015
Gepaid:	CAL000412813
TSD EPA ID:	CAT080013352
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.731

SHELDON ARCO/GILL MOORE OIL COMPANY (Continued) **S123633785**

Additional Info:

Year:	2015
Gen EPA ID:	CAL000412813
Shipment Date:	20151216
Creation Date:	3/5/2016 22:15:15
Receipt Date:	20151228
Manifest ID:	009816421JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAD028277036
Trans 2 Name:	ASBURY ENVIRONMENTAL SERVICES
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.731
Waste Quantity:	215
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000412813
Shipment Date:	20151216
Creation Date:	3/5/2016 22:15:15
Receipt Date:	20151228
Manifest ID:	009816421JJK
Trans EPA ID:	CAR000171017
Trans Name:	FREMOUW ENVIRONMENTAL SERVICES INC
Trans 2 EPA ID:	CAD028277036
Trans 2 Name:	ASBURY ENVIRONMENTAL SERVICES
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.731
Waste Quantity:	215
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

SHELDON ARCO/GILL MOORE OIL COMPANY (Continued) **S123633785**

Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000412813
Shipment Date:	20170125
Creation Date:	5/18/2017 18:32:12
Receipt Date:	20170207
Manifest ID:	016766171JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO/KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Meth Code:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
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:	SHELDON ARCO/GILL MOORE OIL COMPANY
Address:	8361 SHELDON RD
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624
EPA ID:	CAL000412813
Inactive Date:	Not reported
Create Date:	12/02/2015
Last Act Date:	08/12/2019
Mailing Name:	Not reported
Mailing Address:	8355 SHELDON ROAD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ELK GROVE, CA 956240000
Owner Name:	GIL MOORE
Owner Address:	8355 SHELDON ROAD
Owner Address 2:	Not reported
Owner City,State,Zip:	ELK GROVE, CA 956240000
Contact Name:	CHRIS MOORE
Contact Address:	8355 SHELDON ROAD
Contact Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624

NAICS:

EPA ID:	CAL000412813
Create Date:	2015-12-02 13:34:15
NAICS Code:	44719

SHELDON ARCO/GILL MOORE OIL COMPANY (Continued) **S123633785**

NAICS Description:	Other Gasoline Stations
Issued EPA ID Date:	2015-12-02 13:34:15
Inactive Date:	Not reported
Facility Name:	SHELDON ARCO/GILL MOORE OIL COMPANY
Facility Address:	8361 SHELDON RD
Facility Address 2:	Not reported
Facility City:	ELK GROVE
Facility County:	34
Facility State:	CA
Facility Zip:	95624

D13 **SHELDON ARCO** **UST** **U004266372**
West **8361 SHELDON RD** **N/A**
1/8-1/4 **ELK GROVE, CA 95624**
0.245 mi.
1296 ft. **Site 3 of 4 in cluster D**

Relative: **Higher**
Actual: **35 ft.**

UST:

Name:	SHELDON ARCO
Address:	8361 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Facility ID:	FA0051108
Permitting Agency:	Sacramento County Environmental Management Department
Latitude:	38.43814
Longitude:	-121.39638

D14 **SHELDON ARCO** **CERS HAZ WASTE** **S118938873**
West **8361 SHELDON RD** **CERS TANKS** **N/A**
1/8-1/4 **ELK GROVE, CA 95624** **Sacramento Co. ML**
0.245 mi. **CERS**
1296 ft. **Site 4 of 4 in cluster D**

Relative: **Higher**
Actual: **35 ft.**

CERS HAZ WASTE:

Name:	SHELDON ARCO
Address:	8361 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	360143
CERS ID:	10648717
CERS Description:	Hazardous Waste Generator

CERS TANKS:

Name:	SHELDON ARCO
Address:	8361 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	360143
CERS ID:	10648717
CERS Description:	Underground Storage Tank

Sacramento Co. ML:

Name:	SHELDON ARCO
Address:	8361 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Facility Id:	Not reported
Facility Status:	Not reported

SHELDON ARCO (Continued) **S118938873**

FD:	Not reported
Billing Codes BP:	A
Billing Codes UST:	A
WG Bill Code:	A
Target Property Bill Cod:	Not reported
Food Bill Code:	Not reported
CUPA Permit Date:	Not reported
HAZMAT Permit Date:	Not reported
HAZMAT Inspection Date:	Not reported
Hazmat Date BP Received:	Not reported
UST Permit Dt:	Not reported
UST Inspection Date:	Not reported
UST Tank Test Date:	Not reported
Number of Tanks:	3
UST Tank Test Date:	Not reported
SIC Code:	Not reported
Tier Permitting:	Not reported
AST Bill Code:	Not reported
CALARP Bill Code:	Not reported

CERS:

Name:	SHELDON ARCO
Address:	8361 SHELDON RD
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	360143
CERS ID:	10648717
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	23 CCR 16 2715(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(i)
Violation Description:	Failure to have a properly qualified service technician test leak detection equipment as required every 12 months (vapor, pressure, hydrostatic (VPH) system, sensors, line-leak detectors (LLD), automatic tank gauge (ATG), etc.).
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: Annual monitoring system certification and/or leak detector testing was last performed on 11/15/2015 and was completed on 11/30/2016, 15 days past due. These tests are required once every 12 months. CORRECTIVE ACTION: Immediately schedule these tests and provide 48 hours notification to the CUPA. NOTE: TODAY'S ANNUAL MONITORING CERTIFICATION HAS ADDRESSED THIS VIOLATION.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-07-2018
Citation:	23 CCR 16 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(c)(2)(B), 2634(d)(1)(a), 2636(f)(1)
Violation Description:	Failure of the leak detection equipment to have an audible and visual alarm as required.

SHELDON ARCO (Continued) **S118938873**

Violation Notes:	Returned to compliance on 11/07/2018. OBSERVATION: Owner/Operator did not maintain leak detection equipment with an audible and visual alarm. The diesel turbine sump sensor failed to alarm when tested. CORRECTIVE ACTION: Maintain leak detection equipment with an audible and visual alarm. NOTE: This violation applies to the diesel tank system. NOTE: The diesel turbine sump sensor was replaced and retested at the time of inspection.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.
Violation Notes:	Returned to compliance on 01/25/2017. OBSERVATION: The Hazardous Materials Inventory Chemical Description page for to regular fuel should identify the storage pressure as ambient not above ambient. CORRECTIVE ACTION: Complete and submit the Hazardous Materials Inventory Chemical Description page for regular fuel electronically in the California Environmental Reporting System. OBSERVATION: The facility has not submitted the Hazardous Materials Inventory Chemical Description page for LO PH vehicle soap, vehicle shampoo, hydraulic fluid, waste fuel/ water or waste absorbent (all of which are being stored in quantities of 55 gallons or greater) to CERS. CORRECTIVE ACTION: Complete and submit the Hazardous Materials Inventory Chemical Description page for all materials listed above electronically in the California Environmental Reporting System. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THESE VIOLATIONS.
Violation Division:	Sacramento County Env Management Department
Violation Program:	HMRRP
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	HSC 6.7 25290.1(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(e)
Violation Description:	Failure to maintain the interstitial space such that a breach in the primary or secondary containment is detected before the liquid or vapor phase of the hazardous substance stored in the UST tank is released into the environment, i.e., vapor, pressure, hydrostatic (VPH) monitoring.
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: Owner/Operator did not maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment is detected before the liquid or vapor phase of the hazardous substance stored in the UST tank is released into the environment. Both UDC #15/16 and the Vent Box were empty of brine however the monitoring sensors were not in alarm. CORRECTIVE ACTION: Maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment

SHELDON ARCO (Continued) **S118938873**

is detected. Submit verification. NOTE: THE BRINE RESERVOIRS IN UDC #15/16 AND THE VENT BOX WERE FILLED. IN ADDITION, THE WIRING IN BOTH COMPONENTS WAS REWIRED. FOLLOWING THESE ACTIONS BOTH SENSORS WERE TESTED AND FUNCTIONED AS INTENDED. OBSERVATION: Owner/Operator did not maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment is [Truncated]

Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Site ID: 360143
Site Name: Sheldon Arco
Violation Date: 11-13-2019
Citation: 23 CCR 16 2636(f)(2) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2636(f)(2)
Violation Description: Failure of the functional line leak detector (LLD) monitoring pressurized piping to meet one or more of the following requirements: Monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour leak at 10 pounds per square inch and restrict or shut off the flow of product through the piping when a leak is detected.
Violation Notes: OBSERVATION: Owner/Operator did not repair/maintain pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs. The diesel line leak detector failed to detect a leak when tested. CORRECTIVE ACTION: Repair/maintain pressurized piping to meet one or more of the following requirements: monitored at least hourly with the capability of detecting a release of 3.0 gallons per hour, and will restrict the flow of product through the piping or trigger an alarm when a release occurs. NOTE: This violation applies to the diesel tank system.
Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Site ID: 360143
Site Name: Sheldon Arco
Violation Date: 11-30-2016
Citation: 23 CCR 6.7 25284, 25286 - California Code of Regulations, Title 23, Chapter 6.7, Section(s) 25284, 25286
Violation Description: Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes: Returned to compliance on 01/04/2017. OBSERVATION: Owner/Operator did not submit and/or maintain an accurate UST Tank information. All Tank Forms should identify the Riser Pipe Secondary Containment as Fiberglass, both Striker Plate/ Bottom Protector and Containment Sump should be marked as yes, Isolation should be marked under Corrosion Protection section and the forms must include the Date Certified. Also, the Tank ID#'s are not accurate the 87 should be 27135, the 91 should be 27136 and the diesel should be 27137.' CORRECTIVE ACTION: Submit accurate UST Tank information to CERS. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THIS VIOLATION.
Violation Division: Sacramento County Env Management Department
Violation Program: UST

SHELDON ARCO (Continued) **S118938873**

Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	23 CCR 16 2632(d)(1)(C), 2641(h), 2711(a)(8) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2632(d)(1)(C), 2641(h), 2711(a)(8)
Violation Description:	Failure to submit or update a plot plan.
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: Owner/Operator did not submit a plot plan to CERS. CORRECTIVE ACTION: Submit a complete/accurate plot plan to CERS. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THIS VIOLATION.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-07-2018
Citation:	HSC 6.7 25284, 25286 - California Health and Safety Code, Chapter 6.7, Section(s) 25284, 25286
Violation Description:	Failure to submit a complete and accurate application for a permit to operate a UST, or for renewal of the permit.
Violation Notes:	Returned to compliance on 04/15/2019. OBSERVATION: Owner/Operator did not submit and/or maintain an accurate UST Tank information. The diesel tank form should identify vapor recovery primary and secondary as none. CORRECTIVE ACTION: Submit and maintain an accurate UST Tank information. NOTE: This violation applies to the the diesel tank system. NOTE: Please notify Brion McGinness at mcginnessb@saccounty.net following correction of this violation.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description:	Failure to complete and electronically submit a site map with all required content.
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: The annotated site map submitted to this department does not include all access/ egress points, hazardous materials/ waste storage areas inside and outside, storm or sewer drains, locations of emergency response equipment (fire extinguishers, E-stops, spill kits, etc.), electrical panels, emergency evacuation staging area, or the natural gas and/or water shut-offs.. CORRECTIVE ACTION: Revise the annotated Site Map to include all required content and submit electronically in the California Environmental Reporting System. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THIS VIOLATION.
Violation Division:	Sacramento County Env Management Department
Violation Program:	HMRRP
Violation Source:	CERS

SHELDON ARCO (Continued) **S118938873**

Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	Failure to test the spill bucket annually.
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: Annual spill container testing was last performed on 11/15/2015 and was due by 11/15/2016. Today's annual spill bucket testing is 15 days past due. This test is required once every 12 months. CORRECTIVE ACTION: Immediately schedule this test and provide 48 hours notification to the CUPA. NOTE: TODAY'S SPILL BUCKET TESTING HAS ADDRESSED THIS VIOLATION. OBSERVATION: One of the 87 spill buckets failed today's testing event. CORRECTIVE ACTION: Immediately schedule this test and provide 48 hours notification to the CUPA. NOTE: THE FAILED 87 SPILL BUCKET HAD THE DRAIN VALVE REPLACED. FOLLOWING THE REPAIR, THE BUCKET WAS RETESTED AND PASSED.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-07-2018
Citation:	HSC 6.7 25284.2 - California Health and Safety Code, Chapter 6.7, Section(s) 25284.2
Violation Description:	"Failure to meet one or more of the following requirements: Install or maintain a liquid-tight spill container. Have a minimum capacity of five gallons. Have a functional drain valve or other method for the removal of liquid from the spill container. Be resistant to galvanic corrosion. Perform a tightness test at installation, every 12 months thereafter, or within 30 days after a repair to the spill container. Tested using applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Tested by a certified UST service technician. Maintain records of spill containment testing for 36 months. "
Violation Notes:	Returned to compliance on 04/15/2019. OBSERVATION: Owner/Operator did not maintain the spill buckets to maintain a release/ spill. The 87 spill bucket (east spill bucket) failed to maintain a release/ spill when tested. CORRECTIVE ACTION: Maintain spill bucket(s) to maintain a release/ spill until the release can be recovered. NOTE: This violation applies to the the 87 tank system. NOTE: The 87 spill bucket cap was replaced and the spill bucket was retested at the time of inspection. OBSERVATION: Owner/Operator did not maintain the spill buckets to maintain a release/ spill. The diesel spill bucket failed to maintain a release/ spill when tested. CORRECTIVE ACTION: Maintain spill bucket(s) to maintain a release until the release can be recovered. NOTE: This violation applies to the the diesel tank system. NOTE: The diesel spill bucket drain valve was replaced and the spill bucket was retested at the time of inspection.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS

Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-16-2017

SHELDON ARCO (Continued) **S118938873**

Citation:	HSC 6.75 25299.30-25299.34 - California Health and Safety Code, Chapter 6.75, Section(s) 25299.30-25299.34
Violation Description:	Failure to submit and maintain complete and current Certification of Financial Responsibility or other mechanism of financial assurance.
Violation Notes:	Returned to compliance on 04/15/2019. OBSERVATION: The Certification of Financial Responsibility and CFO Letter submitted into the CERS online system do not represent this facility. REQUIRED ACTION; Complete the forms for this address, upload into CERS, and notify D STEELE (steeled@saccounty.net) of the submittal to clear the violation.
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-07-2018
Citation:	HSC 6.7 25290.1(e) - California Health and Safety Code, Chapter 6.7, Section(s) 25290.1(e)
Violation Description:	Failure to maintain the interstitial space such that a breach in the primary or secondary containment is detected before the liquid or vapor phase of the hazardous substance stored in the UST tank is released into the environment, i.e., vapor, pressure, hydrostatic (VPH) monitoring.
Violation Notes:	Returned to compliance on 04/17/2019. OBSERVATION: Owner/Operator did not maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment is detected before the liquid or vapor phase of the hazardous substance stored in the UST tank is released into the environment. Brine was added to UDC #1/2 on August 28, 2018 and on November 17, 2017. CORRECTIVE ACTION: Maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment is detected. Provide documentation indicating that the secondary for UDC #1/2 will be monitored for leaking or documentation indicating that the secondary is not leaking. NOTE: This issue applies to the 87, 91 and diesel tanks. OBSERVATION: Owner/Operator did not maintain the interstitial space under constant vacuum, pressure, or hydrostatic such that a breach in the primary or secondary containment is detected before the liquid or vapor [Truncated]
Violation Division:	Sacramento County Env Management Department
Violation Program:	UST
Violation Source:	CERS
Site ID:	360143
Site Name:	Sheldon Arco
Violation Date:	11-30-2016
Citation:	23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description:	Failure to have a UST Monitoring Plan available on site.
Violation Notes:	Returned to compliance on 01/04/2017. OBSERVATION: Owner/Operator did not maintain an approved monitoring plan. All three monitoring plans should identify the Tank Monitoring Leak Sensor Model# as 303, Pipe Monitoring Leak Sensor Model should be 0794380-208/304, Under Dispenser Containment UDC Leak Sensor Model should be 0794380-208/304, in this same section "UDC Monitoring Stops Flow of Product at Dispenser" should be No, in the Periodic System Testing section "Spill

SHELDON ARCO (Continued) **S118938873**

Bucket Testing" should be marked and in the Record Keeping section only Alarms Logs and Equipment Maintenance and Calibration Records should be marked. CORRECTIVE ACTION: Maintain an approved monitoring plan. Submit completed monitoring plans to CERS. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THIS VIOLATION.

Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Site ID: 360143
Site Name: Sheldon Arco
Violation Date: 11-30-2016
Citation: 23 CCR 16 2712(i) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(i)
Violation Description: Failure to have a UST Response Plan available on site.
Violation Notes: Returned to compliance on 01/04/2017. OBSERVATION: Owner/Operator did not submit an approved response plan. CORRECTIVE ACTION: Submit and maintain an approved response plan to CERS.
Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Site ID: 360143
Site Name: Sheldon Arco
Violation Date: 11-30-2016
Citation: 23 CCR 16 2715(a) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2715(a)
Violation Description: Failure to notify the CUPA of the designated operator (DO) identification and/or change of the DO within 30 days.
Violation Notes: Returned to compliance on 01/04/2017. OBSERVATION: Owner Statement of Designated Underground Storage Tank (UST) Operator and Understanding of and Compliance with UST Requirements does not list all designated operator conducting inspections at this facility. CORRECTIVE ACTION: Submit completed Owner Statement of Designated Underground Storage Tank (UST) Operator and Understanding of and Compliance with UST Requirements to CERS. NOTE: PLEASE NOTIFY BRION MCGINNESS AT MCGINNESSB@SACCOUNTY.NET FOLLOWING CORRECTION OF THIS VIOLATION.
Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Site ID: 360143
Site Name: Sheldon Arco
Violation Date: 11-07-2018
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that

SHELDON ARCO (Continued) **S118938873**

none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: Returned to compliance on 04/15/2019. OBSERVATION: Owner/ Operator did not test the overfill prevention system for the 87, 91 and diesel tanks to meet the following requirement: provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity. CORRECTIVE ACTION: Maintain overfill prevention system to meet the following requirement: provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity. Submit test results as proof of compliance. NOTE: This issue applies to the 87, 91 and diesel tank systems.
Violation Division: Sacramento County Env Management Department
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-07-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Sacramento County Env Management Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-30-2016
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Sacramento County Env Management Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-13-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: No violations observed at the time of inspection.
Eval Division: Sacramento County Env Management Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 11-17-2017

SHELDON ARCO (Continued) **S118938873**

Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Sensors are functional and in correct position. Sumps & buckets are clean and free of debris.
Eval Division:	Sacramento County Env Management Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-13-2019
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	No violations observed at the time of inspection.
Eval Division:	Sacramento County Env Management Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-13-2019
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Sacramento County Env Management Department
Eval Program:	UST
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-30-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	NO VIOLATIONS OBSERVED AT TIME OF INSPECTION.
Eval Division:	Sacramento County Env Management Department
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	11-30-2016
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Sacramento County Env Management Department
Eval Program:	HMRRP
Eval Source:	CERS

Enforcement Action:

Site ID:	360143
Site Name:	Sheldon Arco
Site Address:	8361 SHELDON RD
Site City:	ELK GROVE
Site Zip:	95624
Enf Action Date:	03-15-2018
Enf Action Type:	Notice of Violation (Unified Program)
Enf Action Description:	Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:	Not reported
Enf Action Division:	Sacramento County Env Management Department
Enf Action Program:	UST
Enf Action Source:	CERS

SHELDON ARCO (Continued) **S118938873**

Coordinates:

Site ID:	360143
Facility Name:	Sheldon Arco
Env Int Type Code:	HMBP
Program ID:	10648717
Coord Name:	Not reported
Ref Point Type Desc:	Center of a facility or station.
Latitude:	38.438140
Longitude:	-121.396380

Affiliation:

Affiliation Type Desc:	Identification Signer
Entity Name:	Chris Moore
Entity Title:	VP
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95624
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Gil Moore Oil Company
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:	(916) 714-9828

Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Chris Moore
Entity Title:	VP
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(916) 718-4642

Affiliation Type Desc:	CUPA District
Entity Name:	Sacramento County Environmental Management Departm
Entity Title:	Not reported
Affiliation Address:	10590 Armstrong Avenue, Suite A
Affiliation City:	Sacramento

SHELDON ARCO (Continued) **S118938873**

Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95655
Affiliation Phone:	(916) 875-8550
Affiliation Type Desc:	Document Preparer
Entity Name:	Chris Moore
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Gil Moore Oil Company
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95624
Affiliation Phone:	(916) 714-9828
Affiliation Type Desc:	Parent Corporation
Entity Name:	Sheldon Arco
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Gil Moore Oil Company
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95624
Affiliation Phone:	(916) 714-9828
Affiliation Type Desc:	Environmental Contact
Entity Name:	Chris Moore
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95624
Affiliation Phone:	Not reported
Affiliation Type Desc:	Property Owner
Entity Name:	Gil Moore

SHELDON ARCO (Continued) **S118938873**

Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95624
Affiliation Phone:	(916) 714-9828
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	J. Gilbert Moore
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95624
Affiliation Phone:	(916) 714-9828
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Gil Moore Oil Company
Entity Title:	Not reported
Affiliation Address:	8355 Sheldon Road
Affiliation City:	Elk Grove
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	95624
Affiliation Phone:	(916) 714-9828

15
NE
1/8-1/4
0.245 mi.
1296 ft.

RAYMOND CASE ELEMENTARY
8565 SHASTA LILY DR.
ELK GROVE, CA 95624

HAZNET **S124649085**
HWTS **N/A**

Relative:
Higher

Actual:
35 ft.

HAZNET:

Name:	RAYMOND CASE ELEMENTARY
Address:	8565 SHASTA LILY DR.
Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624
Contact:	ROBERT TERESI
Telephone:	9166867775
Mailing Name:	Not reported
Mailing Address:	9510 ELK GROVE-FLORIN RD
Year:	2018
Gepaid:	CAC002892337
TSD EPA ID:	CAD059494310
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.00600

HWTS:

Name:	RAYMOND CASE ELEMENTARY
Address:	8565 SHASTA LILY DR.

RAYMOND CASE ELEMENTARY (Continued) **S124649085**

Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624
EPA ID:	CAC002892337
Inactive Date:	04/11/2017
Create Date:	01/09/2017
Last Act Date:	04/11/2017
Mailing Name:	Not reported
Mailing Address:	9510 ELK GROVE-FLORIN RD
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ELK GROVE, CA 95624
Owner Name:	ELK GROVE UNIFIED SCHOOL DISTRICT
Owner Address:	9510 ELK GROVE-FLORIN RD
Owner Address 2:	Not reported
Owner City,State,Zip:	ELK GROVE, CA 95624
Contact Name:	ROBERT TERESI
Contact Address:	9510 ELK GROVE-FLORIN RD
Contact Address 2:	Not reported
City,State,Zip:	ELK GROVE, CA 95624

NAICS:

EPA ID:	CAC002892337
Create Date:	2017-01-09 09:44:29
NAICS Code:	339942
NAICS Description:	Lead Pencil and Art Good Manufacturing
Issued EPA ID Date:	2017-01-09 09:44:29
Inactive Date:	2017-04-11 03:00:39
Facility Name:	RAYMOND CASE ELEMENTARY
Facility Address:	8565 SHASTA LILY DR.
Facility Address 2:	Not reported
Facility City:	ELK GROVE
Facility County:	34
Facility State:	CA
Facility Zip:	95624

E16 **CENTURY EQUIPMENT** **RGA LUST** **S114594421**
West **8821 STOCKTON BLVD E** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.278 mi.
1468 ft. **Site 1 of 4 in cluster E**

Relative: **Higher**

Actual: **35 ft.**

RGA LUST:

Name:	CENTURY EQUIPMENT
Address:	8821 STOCKTON BLVD E
City:	ELK GROVE
State:	ELK GROVE
	2012 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name:	CENTURY EQUIPMENT
Address:	8821 STOCKTON BLVD E
City:	ELK GROVE
State:	ELK GROVE
	2011 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name:	CENTURY EQUIPMENT
Address:	8821 STOCKTON BLVD E
City:	ELK GROVE
State:	ELK GROVE
	2010 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name:	CENTURY EQUIPMENT

CENTURY EQUIPMENT (Continued) **S114594421**

Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2009 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2008 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2007 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2006 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2005 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2003 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2002 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
2001 CENTURY EQUIPMENT 8821 STOCKTON BLVD E
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
State: ELK GROVE
1998 CENTURY EQUIPMENT 8821 STOCKTON BLVD E

E17
West
1/4-1/2
0.278 mi.
1468 ft.

STOCKMEN SUPPLY CO
8821 E STOCKTON BLVD
ELK GROVE, CA 95624

Site 2 of 4 in cluster E

Sacramento Co. CS **S103959844**
Sacramento Co. ML **N/A**

Relative:
Higher

Actual:
35 ft.

Sacramento Co. CS:
Name: CENTURY EQUIPMENT
Address: 8821 E STOCKTON BLVD
City,State,Zip: ELK GROVE, CA
State Site Number: C594
Lead Staff: Marcus, B.
Lead Agency: HM

STOCKMEN SUPPLY CO (Continued) **S103959844**

Remedial Action Taken: NO
Substance: Automotive(motor gasoline and additives)
Date Reported: 10/09/1997
Facility Id: RO0001087
Case Type: Soil only
Case Closed: Y
Date Closed: 07/26/2000
Case Type: Soil only affected
Substance: Automotive(motor gasoline and additives)

Sacramento Co. ML:
Name: STOCKMEN SUPPLY CO
Address: 8821 E STOCKTON BLVD
City,State,Zip: ELK GROVE, CA 95624
Facility Id: Not reported
Facility Status: Not reported
FD: Not reported
Billing Codes BP: I
Billing Codes UST: Not reported
WG Bill Code: I
Target Property Bill Cod: Not reported
Food Bill Code: Not reported
CUPA Permit Date: Not reported
HAZMAT Permit Date: Not reported
HAZMAT Inspection Date: Not reported
Hazmat Date BP Received: Not reported
UST Permit Dt: Not reported
UST Inspection Date: Not reported
UST Tank Test Date: Not reported
Number of Tanks: Not reported
UST Tank Test Date: Not reported
SIC Code: Not reported
Tier Permitting: Not reported
AST Bill Code: Not reported
CALARP Bill Code: Not reported

E18 **CENTURY EQUIPMENT** **RGA LUST** **S114594423**
West **8821 STOCKTON BLVD** **N/A**
1/4-1/2 **ELK GROVE, CA**
0.278 mi.
1468 ft. **Site 3 of 4 in cluster E**

Relative:
Higher

Actual:
35 ft.

RGA LUST:
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD
City: ELK GROVE
State: ELK GROVE
2000 CENTURY EQUIPMENT 8821 STOCKTON BLVD

E19 **CENTURY EQUIPMENT** **LUST** **S103708239**
West **8821 STOCKTON** **Cortese** **N/A**
1/4-1/2 **ELK GROVE, CA 95624** **HIST CORTESE**
0.278 mi. **Sacramento Co. ML**
1468 ft. **Site 4 of 4 in cluster E** **CERS**

Relative:
Higher

Actual:
35 ft.

LUST REG 5:
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City: ELK GROVE
Region: 5
Status: Case Closed
Case Number: 341147
Case Type: Undefined
Substance: GASOLINE
Staff Initials: VJF
Lead Agency: Local
Program: LUST
MTBE Code: N/A

LUST:
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
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=T0606700972
Global Id: T0606700972
Latitude: 38.4371409
Longitude: -121.399887
Status: Completed - Case Closed
Status Date: 07/26/2000
Case Worker: Not reported
RB Case Number: 341147
Local Agency: Not reported
File Location: Not reported
Local Case Number: C594
Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0606700972
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: T0606700972
Action Type: Other
Date: 09/18/1997
Action: Leak Discovery

Global Id: T0606700972
Action Type: Other

CENTURY EQUIPMENT (Continued) **S103708239**

Date: 01/02/1965
Action: Leak Reported

LUST:
Global Id: T0606700972
Status: Open - Case Begin Date
Status Date: 09/18/1997

Global Id: T0606700972
Status: Open - Site Assessment
Status Date: 09/18/1997

Global Id: T0606700972
Status: Completed - Case Closed
Status Date: 07/26/2000

CORTESE:
Name: CENTURY EQUIPMENT
Address: 8821 STOCKTON BLVD E
City,State,Zip: ELK GROVE, CA 95624
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0606700972
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

HIST CORTESE:
edr_fname: CENTURY EQUIPMENT
edr_fadd1: 8821 STOCKTON
City,State,Zip: ELK GROVE, CA 95624
Region: CORTESE
Facility County Code: 34
Reg By: LTNKA
Reg Id: 341147

Sacramento Co. ML:
Name: MOSIER IMPLEMENT
Address: 8821 STOCKTON BL

CENTURY EQUIPMENT (Continued) **S103708239**

City,State,Zip:	ELK GROVE, CA 95624
Facility Id:	G0151587
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:	02/01/1989
HAZMAT Inspection Date:	01/06/1997
Hazmat Date BP Received:	Not reported
UST Permit Dt:	01/27/1988
UST Inspection Date:	11/05/1991
UST Tank Test Date:	07/12/1993
Number of Tanks:	2
UST Tank Test Date:	01/06/1997
SIC Code:	5083
Tier Permitting:	Not reported
AST Bill Code:	Not reported
CALARP Bill Code:	Not reported

CERS:

Name:	CENTURY EQUIPMENT
Address:	8821 STOCKTON BLVD E
City,State,Zip:	ELK GROVE, CA 95624
Site ID:	246700
CERS ID:	T0606700972
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:	Not reported

20
West
1/2-1
0.780 mi.
4121 ft.

KALWANI PROPERTY **ENVIROSTOR** **S102432113**
8151 SHELDON ROAD **Sacramento Co. CS** **N/A**
ELK GROVE, CA 95758 **VCP**

Relative:
Lower

Actual:
29 ft.

ENVIROSTOR:

Name:	KALWANI PROPERTY
Address:	8151 SHELDON ROAD
City,State,Zip:	ELK GROVE, CA 95758
Facility ID:	34880001
Status:	No Further Action
Status Date:	12/31/1997
Site Code:	100949
Site Type:	Voluntary Cleanup

KALWANI PROPERTY (Continued) **S102432113**

Site Type Detailed: Voluntary Cleanup
Acres: 1.4
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: William Beckman
Division Branch: Cleanup Sacramento
Assembly: 09
Senate: 06
Special Program: Voluntary Cleanup Program
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 38.43953
Longitude: -121.4063
APN: NONE SPECIFIED
Past Use: UNKNOWN
Potential COC: TPH-MOTOR OIL
Confirmed COC: TPH-MOTOR OIL
Potential Description: SOIL
Alias Name: KALWANI PROPERTY
Alias Type: Alternate Name
Alias Name: 110033607201
Alias Type: EPA (FRS #)
Alias Name: 100949
Alias Type: Project Code (Site Code)
Alias Name: 34880001
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Consultation
Completed Date: 12/31/1997
Comments: VCONS -- DTSC entered into a VCA with a property owner to review documentation of a cleanup performed with Sacramento County oversight. DTSC provided NFA concurrence after reviewing the documentation.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 09/22/1997
Comments: VCA -- DTSC entered into a Voluntary Cleanup Agreement with a property owner to review documentation of a cleanup performed with Sacramento County oversight. DTSC will provide comments on the cleanup.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Voluntary Cleanup Agreement Completion
Completed Date: 01/06/1998
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence

KALWANI PROPERTY (Continued) **S102432113**

Completed Date: 12/31/1997
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

Sacramento Co. CS:
Name: KALWANI PROPERTY
Address: 8151 SHELDON RD
City,State,Zip: ELK GROVE, CA
State Site Number: B371
Lead Staff: Erikson, S.
Lead Agency: HM
Remedial Action Taken: YE, S
Substance: Waste Oil
Date Reported: 06/14/1996
Facility Id: RO0001057
Case Type: Soil only
Case Closed: Y
Date Closed: Not reported
Case Type: Soil only affected
Substance: Waste Oil

VCP:
Name: KALWANI PROPERTY
Address: 8151 SHELDON ROAD
City,State,Zip: ELK GROVE, CA 95758
Facility ID: 34880001
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 1.4
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Not reported
Supervisor: William Beckman
Division Branch: Cleanup Sacramento
Site Code: 100949
Assembly: 09
Senate: 06
Special Programs Code: Voluntary Cleanup Program
Status: No Further Action
Status Date: 12/31/1997
Restricted Use: NO
Funding: Responsible Party
Lat/Long: 38.43953 / -121.4063
APN: NONE SPECIFIED

KALWANI PROPERTY (Continued) **S102432113**

Past Use:	UNKNOWN
Potential COC:	3002502
Confirmed COC:	3002502
Potential Description:	SOIL
Alias Name:	KALWANI PROPERTY
Alias Type:	Alternate Name
Alias Name:	110033607201
Alias Type:	EPA (FRS #)
Alias Name:	100949
Alias Type:	Project Code (Site Code)
Alias Name:	34880001
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Consultation
Completed Date:	12/31/1997
Comments:	VCONS -- DTSC entered into a VCA with a property owner to review documentation of a cleanup performed with Sacramento County oversight. DTSC provided NFA concurrence after reviewing the documentation.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	09/22/1997
Comments:	VCA -- DTSC entered into a Voluntary Cleanup Agreement with a property owner to review documentation of a cleanup performed with Sacramento County oversight. DTSC will provide comments on the cleanup.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	*Voluntary Cleanup Agreement Completion
Completed Date:	01/06/1998
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	12/31/1997
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 5 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ELK GROVE	S119102374	GEORGIA-PACIFIC CHEMICAL CO	10399 STOCKTON BLVD		Sacramento Co. CS
SACRAMENTO	S106230355	14TH AVE LANDFILL- EAST PIT	14TH AVE AND POWER INN RD, EAS		CPS-SLIC
SACRAMENTO	S121636657	ELK GROVE FLORIN RD SHELDON	ELK GROVE FLORIN RD SHELDON		CIWQS
SACRAMENTO	S121673346	SHELDON ELK GROVE FLORIN	SHELDON ELK GROVE FLORIN		CIWQS
SACRAMENTO	S104970714	PRICE CO/DWR - RETENTION POND	E STOCKTON BLVD		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

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
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: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
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: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
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: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
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 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 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 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 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: 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: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
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 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
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: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
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: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
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: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

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: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
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: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
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: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/15/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 69

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/24/2020
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: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
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: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
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: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
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: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
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: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
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: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/19/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/03/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
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: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
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: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
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: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
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: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 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: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
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: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
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: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
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: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
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: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
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: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/31/2020
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: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
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: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
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: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
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: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
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: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
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: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
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: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
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: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
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: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
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: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
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: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
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: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
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: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
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: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
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: 02/11/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
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: 03/31/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
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: 01/16/2018
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/22/2020
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
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: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
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: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
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: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
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: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
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: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
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: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 69

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
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: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
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: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
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: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
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: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
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: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 02/12/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
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: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
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: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

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: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

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: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

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: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

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: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196
Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182
Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13
Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
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: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
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: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
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: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/02/2020
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: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
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: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42
Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
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: 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: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
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: 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: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
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: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
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: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
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: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 69

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
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: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
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: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
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: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
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: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
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: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
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: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
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: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
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: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
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: 05/26/2020
Next Scheduled EDR Contact: 09/13/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 01/23/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/08/2020
Number of Days to Update: 66

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
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: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
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: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
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: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
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: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
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: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
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: 01/27/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
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: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
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: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
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: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
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: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
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: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
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

SHELDON GROVE SUBDIVISION
SHELDON ROAD
ELK GROVE, CA 95624

TARGET PROPERTY COORDINATES

Latitude (North):	38.439183 - 38° 26' 21.06''
Longitude (West):	121.39 - 121° 23' 24.00''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	640514.3
UTM Y (Meters):	4255566.0
Elevation:	34 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5619710 FLORIN, CA
Version Date:	2012
East Map:	5629052 ELK GROVE, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

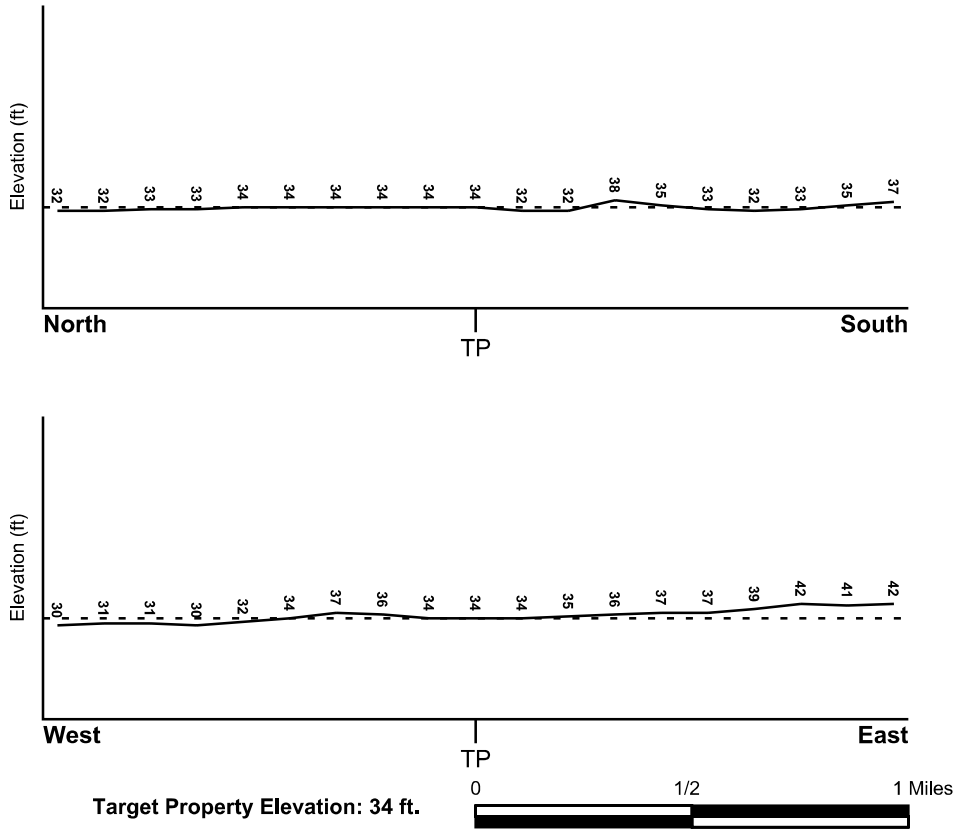
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06067C0309H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06067C0308H	FEMA FIRM Flood data
06067C0328H	FEMA FIRM Flood data
06067C0316H	FEMA FIRM Flood data
06067C0317H	FEMA FIRM Flood data
06067C0336H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
FLORIN	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

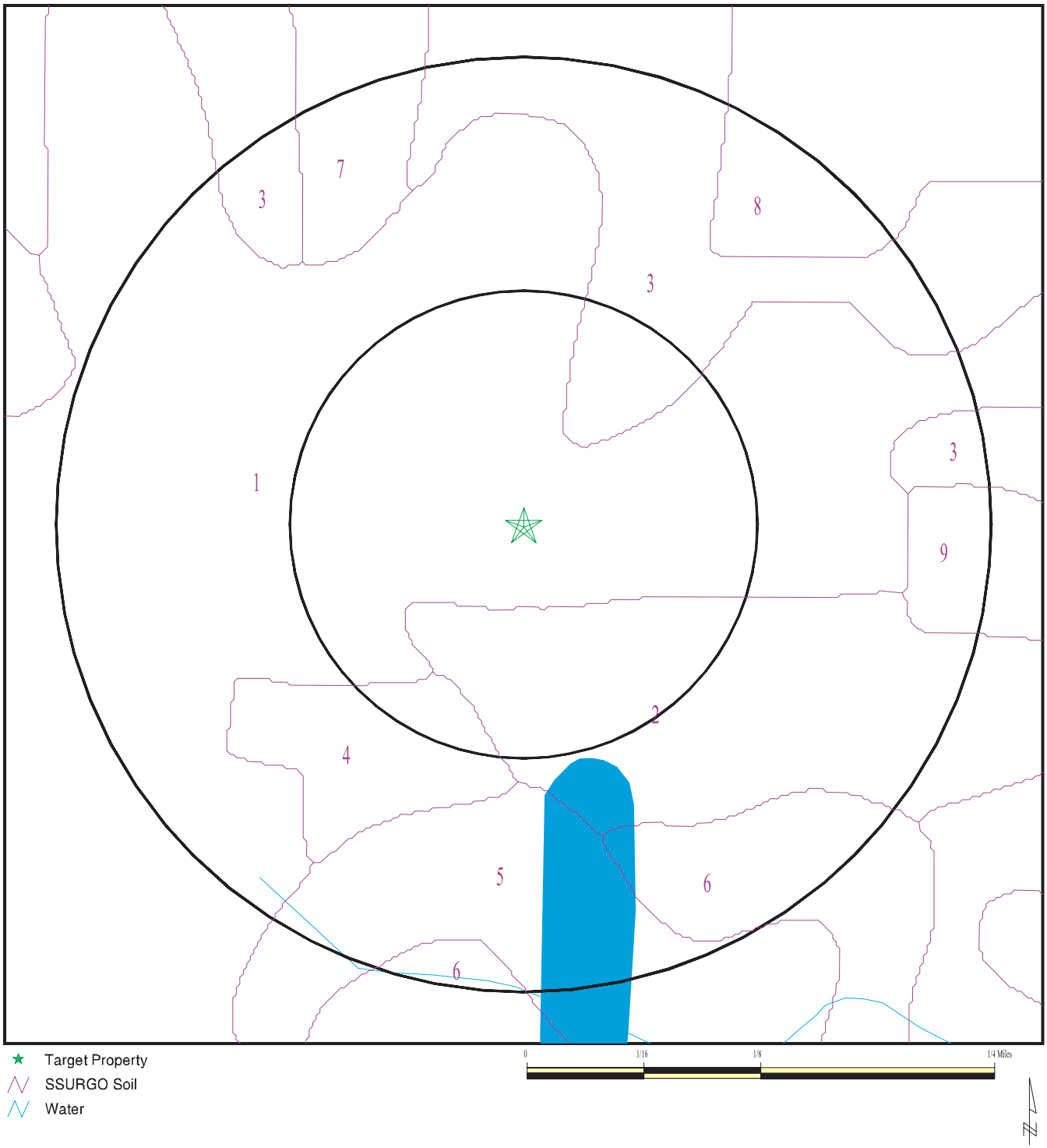
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

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 - 6145801.2s



SITE NAME:	Sheldon Grove Subdivision	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Sheldon Road Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.439183 / 121.39	INQUIRY #:	6145801.2s
		DATE:	August 05, 2020 4:25 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, 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

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
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: 2

Soil Component Name: MADERA

Soil Surface Texture: loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

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	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
2	14 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	29 inches	59 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

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

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
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

Soil Map ID: 4

Soil Component Name: DURIXERALFS

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

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	5 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	20 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
3	20 inches	59 inches	indurated	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: DIERSSEN

Soil Surface Texture: sandy clay 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: Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

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	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	14 inches	31 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
3	31 inches	59 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Map ID: 6

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

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
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: 7

Soil Component Name: GALT

Soil Surface Texture: clay

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: High

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	12 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
2	12 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:
3	31 inches	59 inches	cemented	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.01 Min: 0	Max: Min:

Soil Map ID: 8

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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	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: 9

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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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

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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000188328	1/4 - 1/2 Mile East
3	USGS40000188318	1/2 - 1 Mile WSW
4	USGS40000188342	1/2 - 1 Mile WNW
6	USGS40000188324	1/2 - 1 Mile East

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

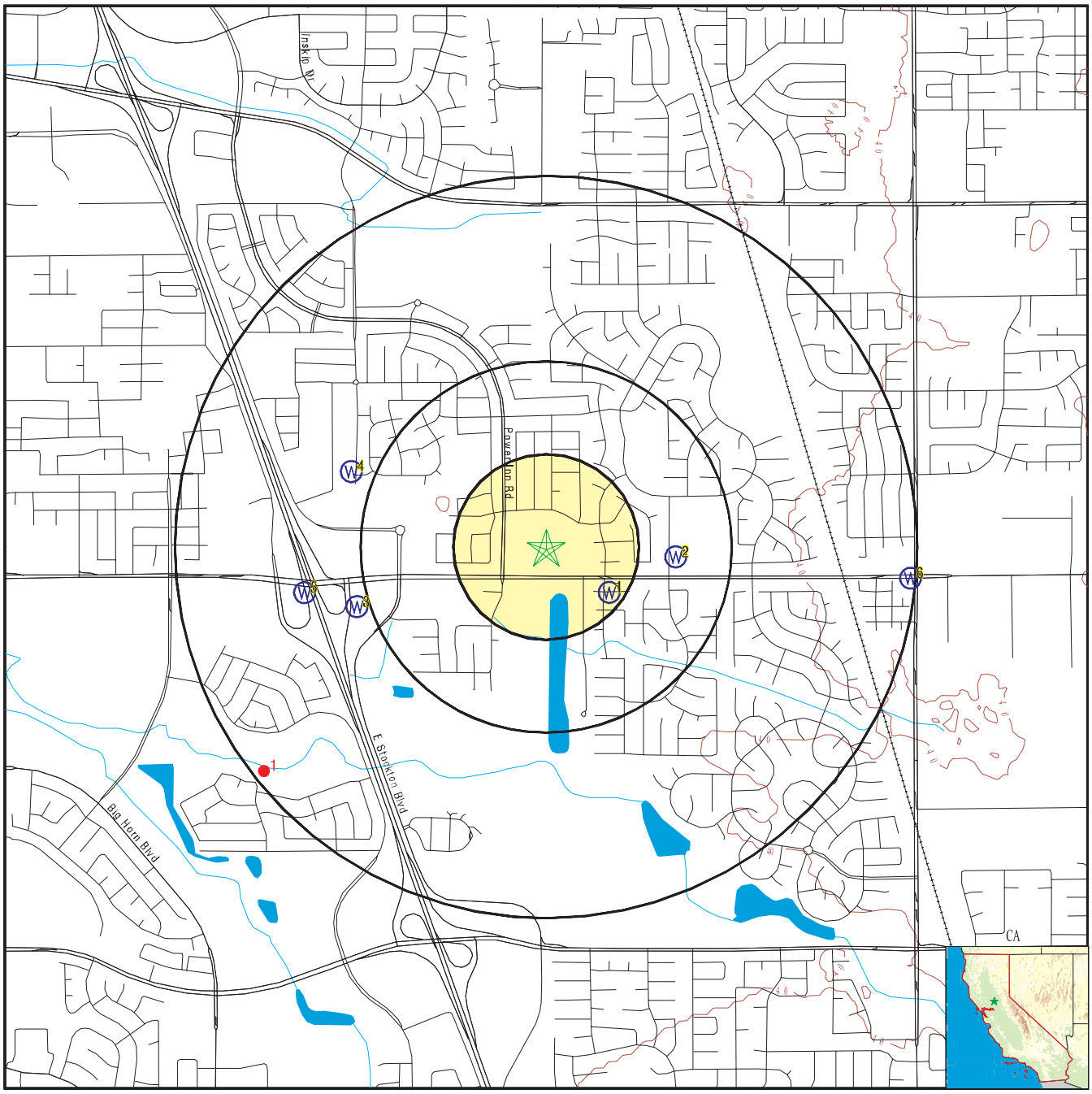
MAP ID	WELL ID	LOCATION FROM TP
1	18579	1/8 - 1/4 Mile SE
5	CADWR8000037994	1/2 - 1 Mile West

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG13000007980	1/2 - 1 Mile SW

PHYSICAL SETTING SOURCE MAP - 6145801.2s



- 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
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Sheldon Grove Subdivision	CLIENT:	Wallace - Kuhl & Associates
ADDRESS:	Sheldon Road Elk Grove CA 95624	CONTACT:	Nancy Malaret
LAT/LONG:	38.439183 / 121.39	INQUIRY #:	6145801.2s
		DATE:	August 05, 2020 4:25 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
CA WELLS	**18579**

1
SE
1/8 - 1/4 Mile
Higher

Seq:	18579	Prim sta c:	3410029-019
Frds no:	3410029019	County:	34
District:	09	User id:	TEN
System no:	3410029	Water type:	G
Source nam:	WELL 65 - SHELDON	Station ty:	WELL/AMBNT
Latitude:	382615.0	Longitude:	1212309.0
Precision:	3	Status:	AR
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:	3410029	System nam:	Scwmd Laguna/Vineyard
Hqname:	Not Reported	Address:	827 7th Street, Room 301
City:	Sacramento	State:	Ca
Zip:	95814	Zip ext:	Not Reported
Pop serv:	20259	Connection:	13272
Area serve:	LAGUNA VINEYARD		

Sample date:	15-FEB-18	Finding:	9.3
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		

Sample date:	15-NOV-17	Finding:	10.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		

Sample date:	23-AUG-17	Finding:	91.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	140.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	110.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	8.
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	280.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	11.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	21.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	23-AUG-17	Finding:	11.
Chemical:	CHROMIUM, HEXAVALENT	Report units:	UG/L
Dlr:	1.		
Sample date:	23-AUG-17	Finding:	18.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	7.8
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	1.1
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-MAY-17	Finding:	0.8
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	09-MAY-17	Finding:	180.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	160.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	09-MAY-17	Finding:	4.9
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	09-MAY-17	Finding:	1.7
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	09-MAY-17	Finding:	9.3
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	20.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	10.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	16.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	81.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	1.1
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	09-MAY-17	Finding:	130.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L

Dlr:	0.		
Sample date:	09-MAY-17	Finding:	110.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	09-MAY-17	Finding:	250.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	16-MAY-16	Finding:	0.93
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	13-MAY-15	Finding:	4.7
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	13-MAY-15	Finding:	1.07
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	13-MAY-15	Finding:	0.156
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	20-AUG-14	Finding:	250.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	8.2
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	8.9
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	240.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	110.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	130.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	87.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	18.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	10.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	22-MAY-14	Finding:	20.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	22-MAY-14	Finding:	6.3
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	22-MAY-14	Finding:	2.8
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	22-MAY-14	Finding:	11.
Chemical:	CHROMIUM (TOTAL)	Report units:	UG/L
Dlr:	10.		
Sample date:	22-MAY-14	Finding:	1200.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	22-MAY-14	Finding:	5.1
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	22-MAY-14	Finding:	180.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	18-FEB-14	Finding:	210.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	15-MAY-13	Finding:	4.9
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	15-MAY-12	Finding:	4.6
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		

2
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000188328**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N005E24P001M	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:	155
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	2	Level reading date:	1982-08-02
Feet below surface:	108.68	Feet to sea level:	Not Reported
Note:	The site had been pumped recently.		

Level reading date:	1977-01-01	Feet below surface:	120.00
Feet to sea level:	Not Reported	Note:	Not Reported

3
WSW **FED USGS** **USGS40000188318**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N005E26C003M	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:	19780220	Well Depth:	155
Well Depth Units:	ft	Well Hole Depth:	210
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	2	Level reading date:	1982-08-03
Feet below surface:	102.73	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1978-02-20	Feet below surface:	98.00
Feet to sea level:	Not Reported	Note:	Not Reported

4
WNW **FED USGS** **USGS40000188342**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N005E23L001M	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:	155
Well Depth Units:	ft	Well Hole Depth:	210
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1982-08-02
Feet below surface:	102.70	Feet to sea level:	Not Reported
Note:	Not Reported		

5
West **CA WELLS** **CADWR8000037994**
1/2 - 1 Mile
Lower

State Well #:	07N05E26C001M	Station ID:	6719
Well Name:	Not Reported	Well Use:	Irrigation
Well Type:	Unknown	Well Depth:	519
Basin Name:	South American	Well Completion Rpt #:	61393

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS40000188324**

6
East
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	007N005E25A001M	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:	180
Well Depth Units:	ft	Well Hole Depth:	213
Well Hole Depth Units:	ft		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
SW
1/2 - 1 Mile

OIL_GAS **CAOG13000007980**

API #:	0406700311	Well #:	1
Well Status:	Plugged	Well Type:	DH
Operator Name:	E. A. Bender	Lease Name:	J.P. Kramer
Field Name:	Any Field	Area Name:	Any Area
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	SPUD Date:	04/05/1953

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.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: 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

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX E

Preliminary Screen for Vapor Encroachment Conditions Matrix

Screen for Vapor Encroachment Conditions Matrix
SHELDON GROVE SUBDIVISON
WKA No. 102865.01

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 F

ENVIRONMENTAL NOISE ASSESSMENT

Environmental Noise Assessment

Sheldon Grove

City of Elk Grove, California

October 26, 2020

Project #200802

Prepared for:

Raney Planning and Management, Inc.
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Prepared by:

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INTRODUCTION

The Sheldon Grove residential project is located along the north of Sheldon Road and east of Power Inn Road in the City of Elk Grove, California. The project consists of the construction of 123 single-family residential lots.

Figure 1 shows the project site plan. **Figure 2** shows an aerial photo of the project site.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

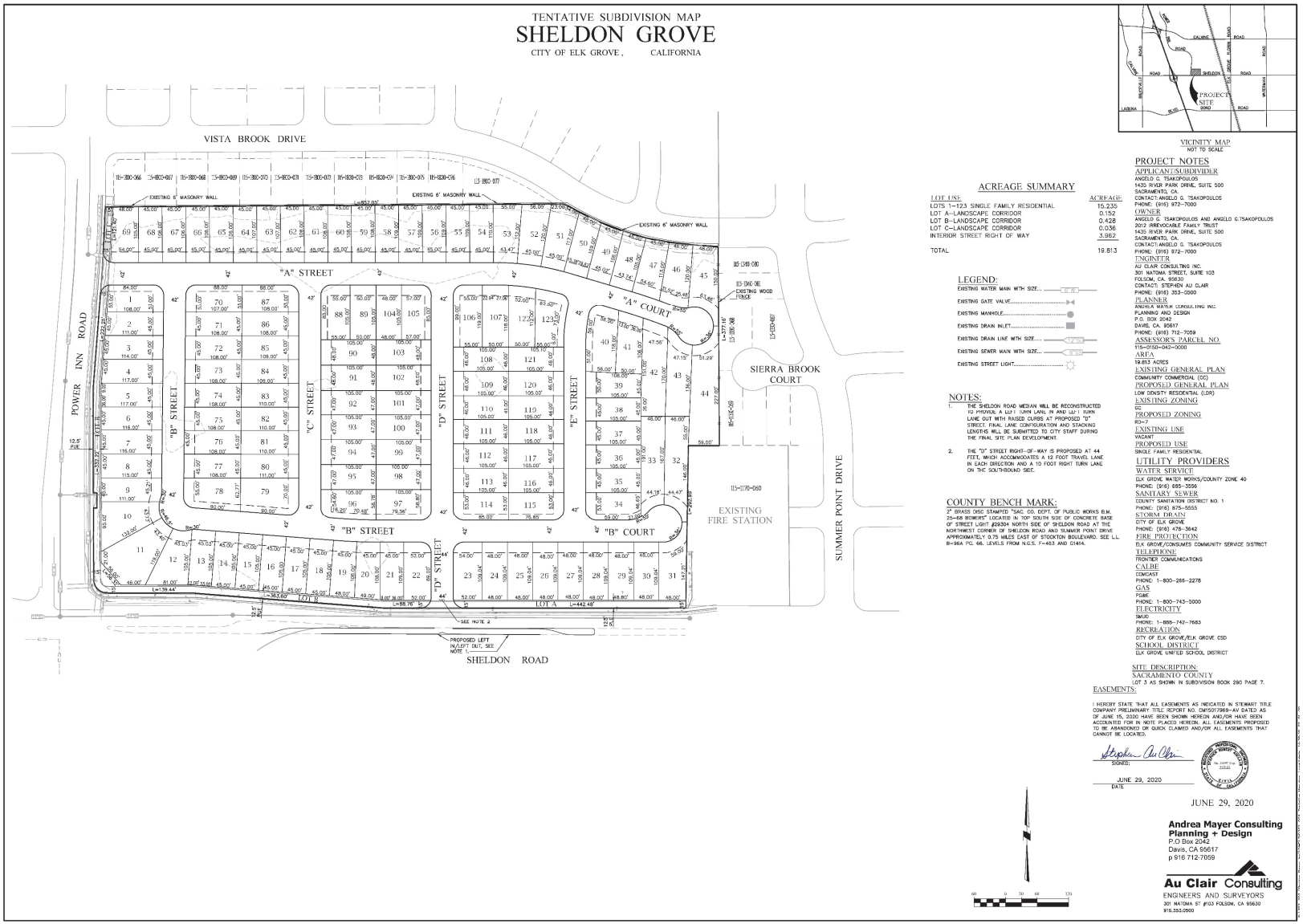
Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.



Sheldon Grove
City of Elk Grove, California

Figure 1
Project Site Plan

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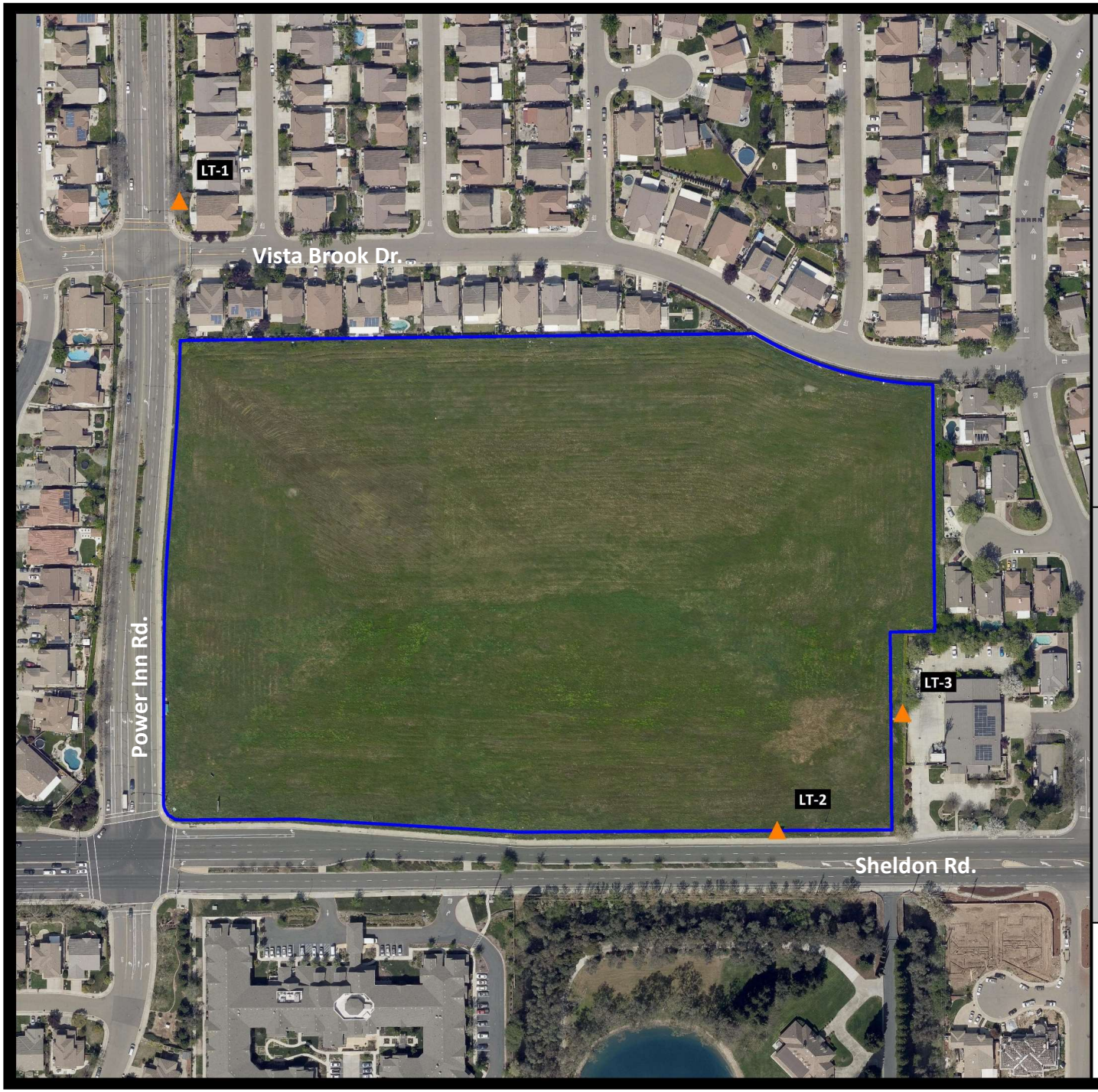

Sheldon Grove

City of Elk Grove, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement - Long Term

0 m 50 m 100 m

Projection: State Plane (California Zone 2) / NAD83 / meters
Rev. Date: 10/01/2020

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include existing single-family residential uses located east, west, and north of the project site.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is primarily defined by traffic on Sheldon Road and Power Inn Road.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted continuous (24-hr.) noise level measurements at three locations on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 812 and 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Location	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	Northwest of Project Site	8/1/20	68.6	67	59	89	61	51	82
LT-2	Sheldon Road	8/1/20	72.5	71	68	87	65	56	82
LT-3	Fire Station	8/1/20	62.4	58	56	75	56	53	71

Notes:
- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.
- Source: Saxelby Acoustics 2020

FUTURE TRAFFIC NOISE ENVIRONMENT AT OFF-SITE RECEPTORS

Off-Site Traffic Noise Impact Assessment Methodology

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at sensitive receptors for existing and future, project and no-project conditions.

Existing and Future noise levels due to traffic are calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment.

The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Project trip generation volumes were provided by the project traffic engineer (Kimley Horn, 2020), truck usage and vehicle speeds on the local area roadways were estimated from field observations. The predicted increases in traffic noise levels on the local roadway network for Existing and Future conditions which would result from the project are provided in terms of the day/night average (L_{dn}) descriptor. It should be noted that the City's transportation noise standards are in terms of L_{dn}, thus the use of L_{dn} in **Table 3**.

Table 3 summarizes the modeled traffic noise levels at the nearest sensitive receptors along each roadway segment in the Project area. **Appendix C** provides the complete inputs and results of the FHWA traffic modeling.

TABLE 3: PREDICTED TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES

Roadway	Segment	Existing No Project	Existing + Project	Change	Cumulative No Project	Cumulative + Project	Change	Cumulative No Project	Cumulative (w/Commercial Development)	Change
Power Inn Rd.	North of Sheldon Rd.	64.1	64.1	0.0	65.1	65.1	0.0	65.1	65.1	0.0
Sheldon Rd.	East of Power Inn Rd.	65.7	65.8	0.1	65.9	66.0	0.1	65.9	66.4	0.5

Note: All noise levels are predicted at closest sensitive receptors in terms of dBA, L_{dn}.

EVALUATION OF TRANSPORTATION NOISE SOURCES ON THE PROJECT SITE

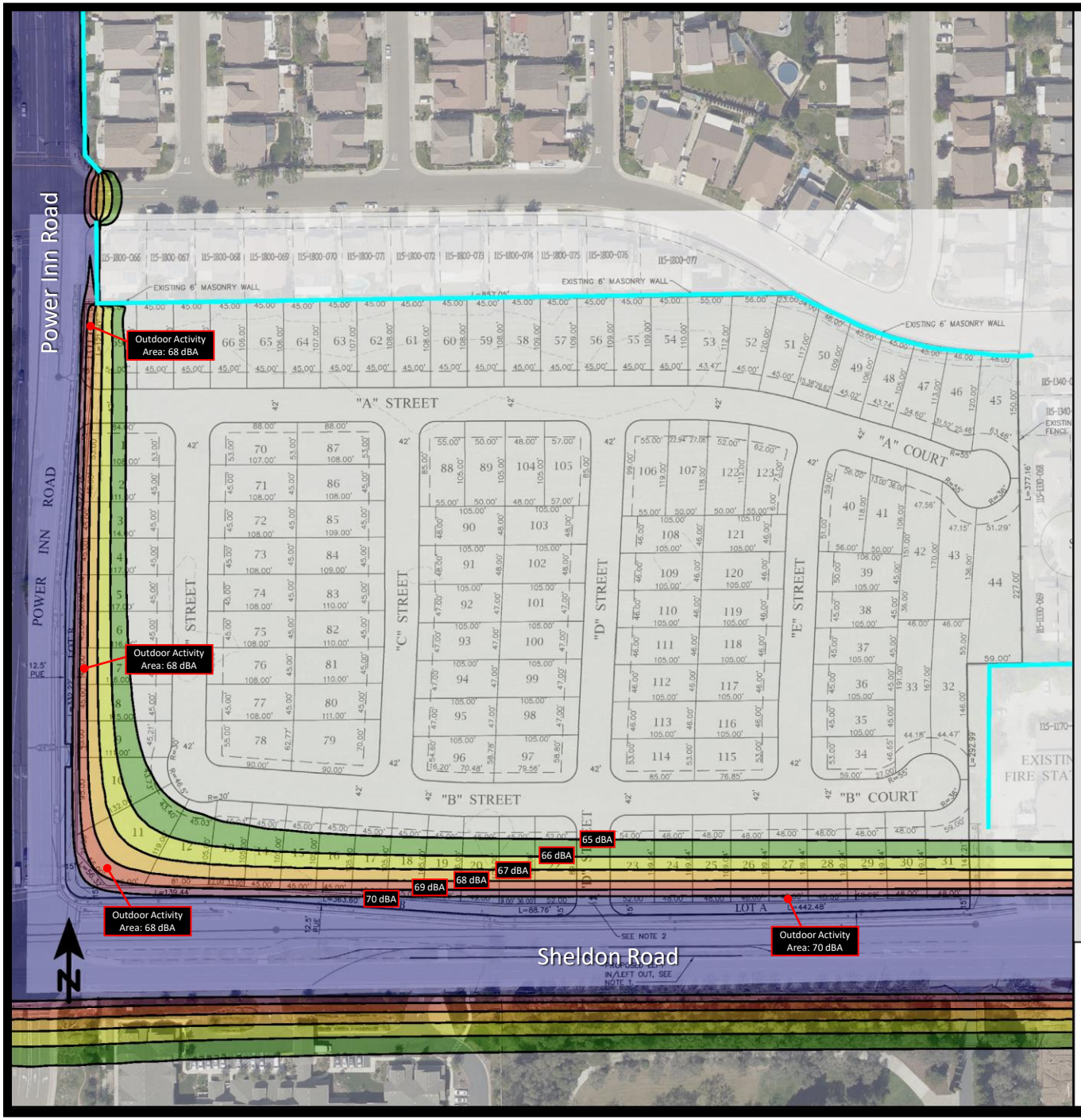
On-Site Transportation Noise Prediction Methodology

Saxelby Acoustics used the SoundPLAN noise model to calculate traffic noise levels at the proposed residential uses due to traffic on Sheldon Road and Power Inn Road. The proposed project buildings and surrounding structures were input into the SoundPLAN model to determine the traffic noise exposure on the project site. Future (2041) traffic noise levels for Power Inn Road and Sheldon Road were calculated based upon the project traffic study (Kimley-Horn). Future traffic noise levels for Sheldon Road and Power Inn Road were calculated using the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108). The results of this analysis are shown graphically on **Figure 3**.

Cosumnes CSD Fire Station Operation Noise on The Project Site

To assess noise generated by the Fire Station on the Project site, Saxelby Acoustics assumed an average of four events on the fire station site during a peak hour. Parking lot movement for heavy trucks such as a fire engine is predicted to generate a sound exposure level (SEL) of 85 dBA at 50 feet. It is assumed that the four trips per hour could occur during either daytime or nighttime hours. Based on field observations, siren noise occurs off-site.

The fire station is expected to generate noise levels of up to 49 dBA L_{eq} in the outdoor activity area of Lot 31. Lot 32 is expected to be exposed to noise levels less than 45 dBA L_{eq} due to shielding from the existing 6-foot wall separating the fire station from the Project site.



Sheldon Grove

City of Elk Grove, California

Figure 3

Future (2041) Transportation Noise Contours (dBA L_{dn})

Signs and symbols

Existing Sound Wall

Levels in dB(A)

<= 65
65 - 66
66 - 67
67 - 68
68 - 69
69 - 70
> 70

1 : 2100

0 10 20 40 60 80 m

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CONSTRUCTION NOISE ENVIRONMENT

During the construction of the proposed project noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 4: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill 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: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

CONSTRUCTION VIBRATION ENVIRONMENT

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **TABLE 5** shows the typical vibration levels produced by construction equipment.

TABLE 5: 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)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: *Transit Noise and Vibration Impact Assessment Guidelines.* Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

There are no state regulations related to noise that apply to the Proposed Project.

LOCAL

City of Elk Grove General Plan

The Elk Grove General Plan Noise Element Table 8-4 establishes standards for daytime and nighttime noise levels. The standards are reproduced in **Table 6** below:

TABLE 6: PERFORMANCE STANDARDS FOR TYPICAL STATIONARY NOISE SOURCES

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

The Elk Grove General Plan Noise Element Table 8-3 establishes standards for maximum allowable noise exposure from transportation noise sources. The maximum allowable exterior noise level is 60 dBA L_{dn}, applied at outdoor activity areas of transient lodging uses (General Plan Noise Element Table 8-3). The exterior and interior noise standards are described in **Table 7**.

TABLE 7: ELK GROVE LAND USE COMPATIBILITY STANDARDS

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	60[3]	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (the passing of a single train, as opposed to relatively steady noise sources such as roadways)	60[3]	40[5]	--
Transient Lodging	60[4]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45

a. Where the location of outdoor activity areas is unknown, the exterior noise level standards shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patios or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.
b. Transportation projects subject to Caltrans review or approval shall comply with the Federal Highway Administration noise standards for evaluation and abatement of noise impacts
c. As determined for a typical worst-case hour during periods of use.
d. Where it is not possible to reduce noise in outdoor activity areas to 60dB,Ldn or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB, Ldn may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
e. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.
f. The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.
g. In cases where the existing ambient noise level exceeds 60 dBA, the maximum allowable project-related permanent increase in ambient noise levels shall be 3 dBA /Ldn.

Source: Elk Grove General Plan, Noise Element Table 8-3

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that 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 will depend 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 can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (ppv) in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

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 8**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 8 indicates that 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 Noise Element Policy N-1-9 establishes 0.2 in/sec ppv as the threshold at which additional vibration impact assessment reduction measures may be required.

TABLE 8: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
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.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-c]).

Would the project:

a. Generate 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. Generate 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?

Noise Level Increase Criteria for Long-Term Project-Related Noise Level Increases

The California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if it "increases substantially the ambient noise levels for adjoining areas." Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. **Table 9** is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes

in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}.

TABLE 9: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, Ldn	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON)

Based on the **Table 9** data, an increase in the traffic noise level of 5 dB or more would be significant where the pre-project noise levels are less than 60 dB Ldn, or 3 dB or more where existing noise levels are between 60 to 65 dB Ldn. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise level exceeds 65 dB Ldn. The rationale for the **Table 9** criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

It should be noted that the City of Elk Grove General Plan Noise Element formally establishes the **Table 9** criteria as the CEQA thresholds for evaluating noise impacts.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

IMPACT 1: WOULD THE PROJECT GENERATE 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?

Traffic Noise Increases

Based upon the **Table 9** FICON criteria, where existing traffic noise levels are greater than 65 dB L_{dn}, at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in roadway noise levels will be considered significant. As shown in **Table 3**, the maximum increase in traffic noise at the nearest sensitive receptor is predicted to be 0.1 dBA under the proposed project. Therefore, impacts resulting from increased traffic noise would be considered ***less-than-significant***.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Construction activities are conditionally exempt from the Noise Ordinance during certain hours. Section 6.32.100(E) of the City of Elk Grove Municipal code exempts construction from the City's noise standards between the hours of 7:00 a.m. and 7:00 p.m. when located in close proximity to residential uses.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered ***potentially significant***.

Exterior noise at New Sensitive Receptors (Non-CEQA Issue)

Exterior Transportation Noise

Compliance with City standards on new noise-sensitive receptors is not a CEQA consideration. However, this information is provided here so that a determination can be made regarding the ability of the proposed project to meet the requirements of the City of Elk Grove for exterior and interior noise levels at new sensitive uses proposed under the project.

As shown on **Figure 3**, the western and southern boundaries of the project site are predicted to be exposed to exterior noise levels up to approximately 70 dBA L_{dn}. This would exceed the 60 dB limit for outdoor activity areas of new residential uses. Exterior noise control measures would be recommended to ensure that future residents are not exposed to exterior noise levels exceeding City standards. Various sound wall heights were analyzed at the locations shown on **Figure 4.** Based upon the noise predictions shown in **Table 10**, exterior noise levels can be reduced to less than 65 dBA L_{dn} along Sheldon Road and Power Inn Road with the use of 6-foot tall sound walls. The City of Elk Grove General Plan allows for exterior noise levels up to 65 dBA L_{dn} where it is not possible to reduce noise to 60 dBA L_{dn} or less and available noise reduction measures have been implemented (**Table 7**).

See **Appendix D** for a complete barrier analysis for each roadway segment. **Figure 4** shows approximate recommended sound wall locations.

TABLE 10: FUTURE (2041) NOISE LEVELS AT SENSITIVE RECEPTORS

Segment	Approximate Residential Setback, feet[1]	ADT	Predicted Traffic Noise Levels, dB Ldn[2]					
			No Wall	6' Wall	7' Wall	8' Wall	9' Wall	10' Wall
Power Inn Road	70	18,000	68	62	61	59	58	57
Sheldon Road	60	29,000	70	64	63	61	60	59

[1] Setback distances are measured in feet from the centerlines of the roadways to the center of residential backyards.

[2] The modeled noise barriers assume flat site conditions where roadway elevations, base of wall elevations, and building pad elevations are approximately equivalent. Sound wall height may be achieve d through the use a wall and earthen berm to achieve the total height (i.e. 6-foot wall on 2-foot berm is equivalent to an 8-foot tall wall).

Interior Transportation Noise

Unshielded first floor traffic noise levels of up to 68 dBA L_{dn} are predicted along Power Inn Road, and 70 dBA L_{dn} along Sheldon Road. However, first floor noise levels are expected to be less than 65 dBA Ldn after construction of sound walls. Assuming an exterior-to-interior noise level reduction of 25 dBA from typical building construction, first floor interior noise levels would be expected to be 40 dBA L_{dn}, or less. Second floor facades are typically exposed to exterior noise levels 2-3 dBA higher than first floor facades. Additionally, second floor facades do not receive shielding form sound walls. Therefore, exterior noise levels up to 71 dBA L_{dn} along Power Inn Road and 73 dBA L_{dn} along Sheldon Road are predicted, at second floor facades. This would result in interior noise levels of approximately 46-48 dBA L_{dn}, which exceeds the City's interior noise standard of 45 dBA L_{dn}.

In order to meet the City's standard, additional interior noise control measures are likely to be needed. This would likely include the use of sound transmission class (STC) rated windows in the range of STC 30-35, depending on the amount of window glazing and exterior wall finishes. Therefore, a detailed interior noise analysis should be conducted once building plans are available to determine the specific noise control measures required to meet the City's interior noise standard.

Non-Transportation Noise

The Cosumnes CSD Fire Station is predicted to generate noise levels of up to 49 dBA L_{eq} in the outdoor activity area of the adjacent Lot 31. This exceeds the City of Elk Grove nighttime (10 p.m. to 7 a.m.) stationary noise standard of 45 dBA L_{eq}. However, this level would be attenuated to 42 dBA L_{eq} with the addition of the 6-foot sound wall recommended for traffic noise attenuation, as shown on **Figure 4**.

Sheldon Grove

City of Elk Grove, California

Figure 4

Recommended Sound Wall Locations



Legend

Recommended Sound Walls

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Mitigation Measure

MM-1 The City shall establish the following requirement:

- 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 sufficiently shielded to reduce noise-related impacts.

Timing/Implementation: Implemented prior to approval of grading and/or building permits
Enforcement/Monitoring: City of Elk Grove Community Development Services Department

Implementation of mitigation measure 1 would help to reduce construction-generated noise levels. With mitigation, this impact would be considered ***less-than-significant***.

Recommended Condition of Approval

Prior to approval of project improvement plans, the plans for the proposed project shall show that the first-row lots shall be shielded from Power Inn Road and Sheldon Road through the use of minimum six-foot tall masonry sound walls per the approval of the City Engineer. The approximate locations of these barriers are shown on ***Figure 4****. Other types of barrier may be employed but shall be reviewed by an acoustical engineer prior to being constructed. Additionally, an interior noise analysis shall be prepared by a qualified acoustic engineer outlining the measures required to meet the City's 45 dBA* L_{dn} *interior noise standard, especially at unshielded second floor facades.*

IMPACT 2: WOULD THE PROJECT GENERATE EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 5** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 26 feet, or further, from typical construction activities. At these distances construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 3: 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?

There are no airports in the project vicinity. Therefore, this impact is not applicable to the proposed project.

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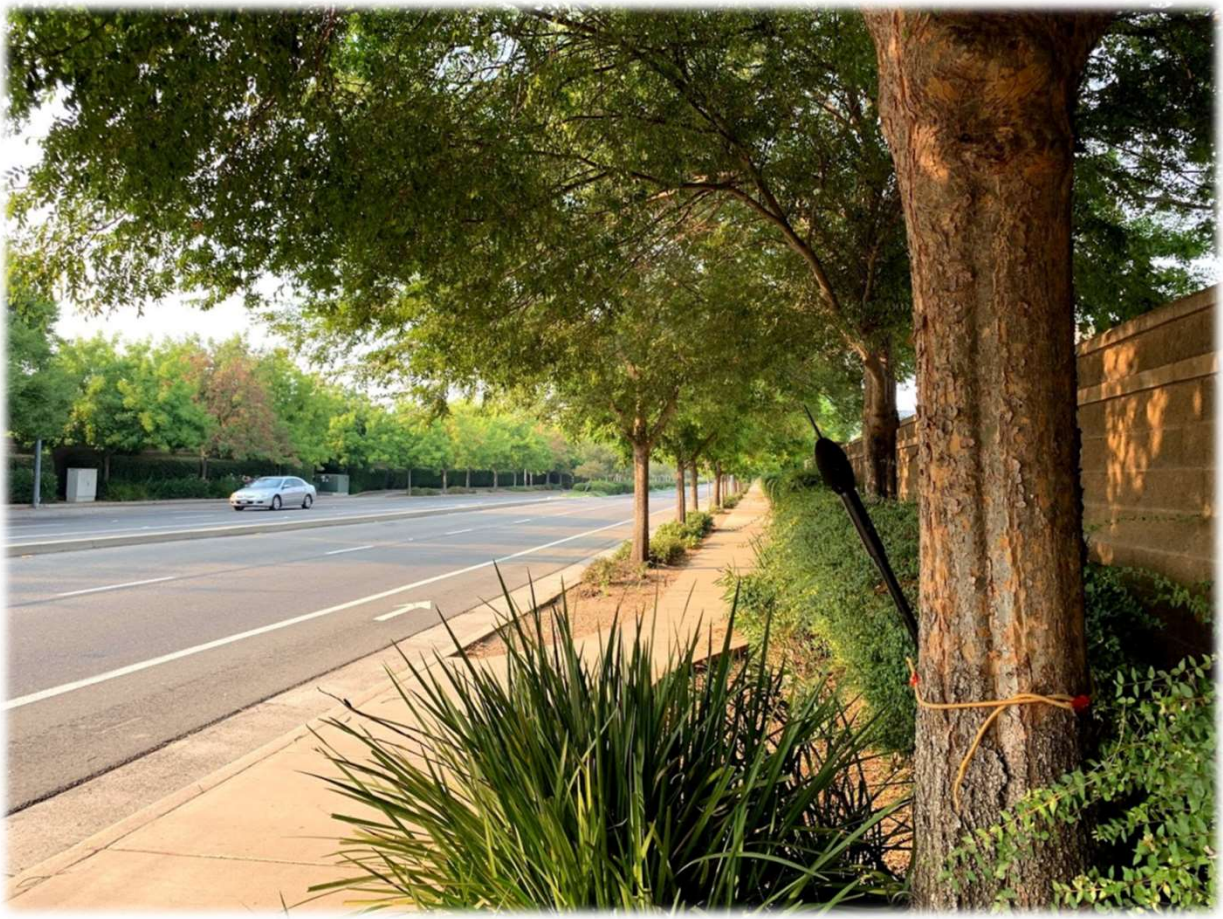
Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

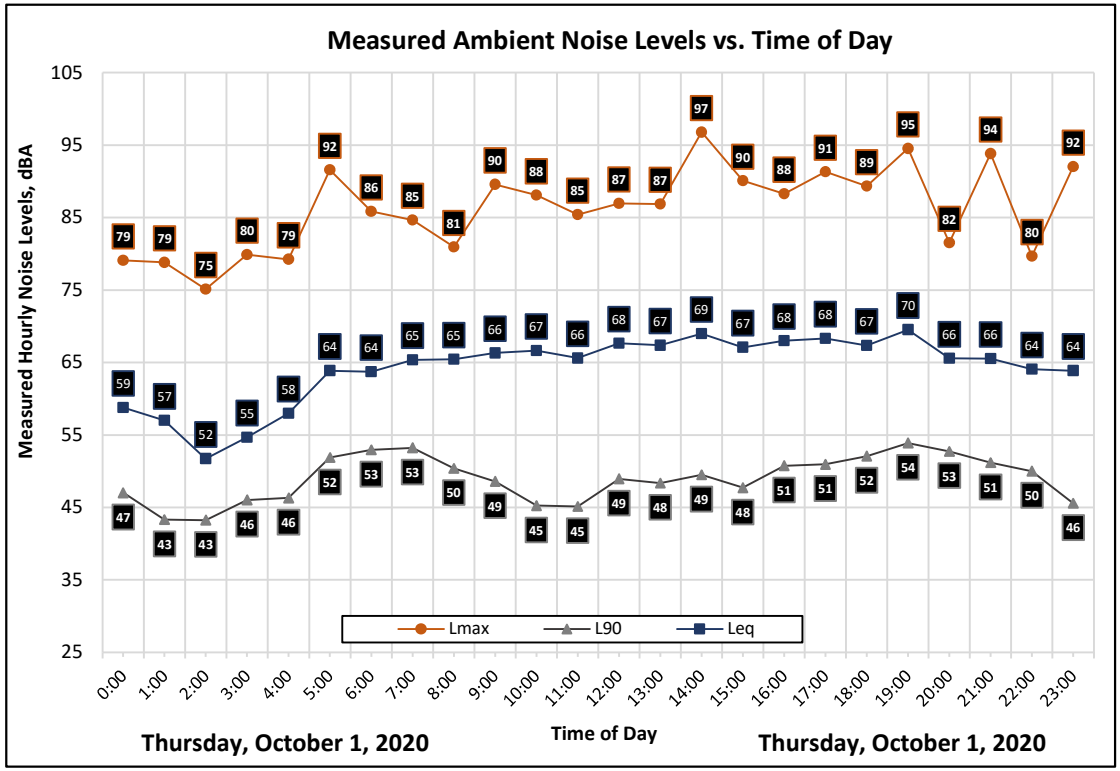


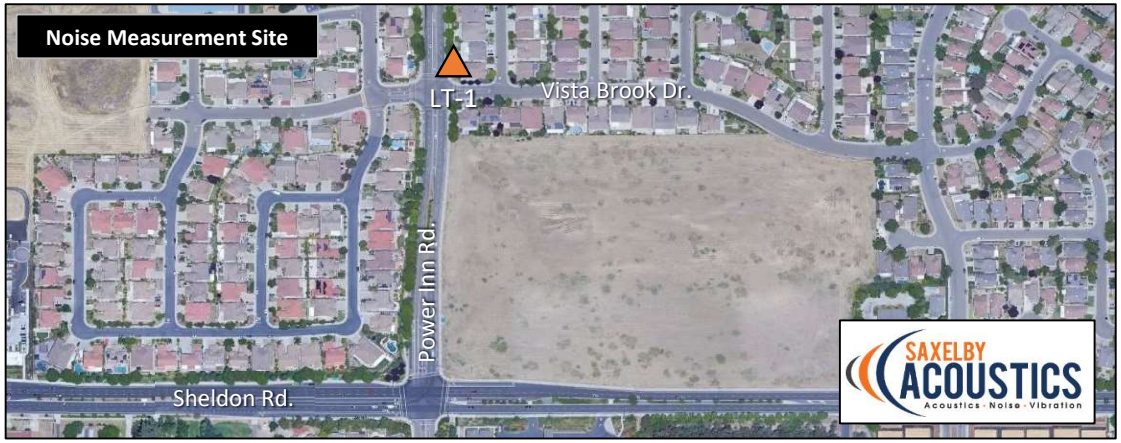
Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: Sheldon Grove
Location: Northwest of Project Site
Coordinates: 38.4407899°, -121.3919044°
Meter: LDL 812-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, October 1, 2020	0:00	59	79	52	47
Thursday, October 1, 2020	1:00	57	79	46	43
Thursday, October 1, 2020	2:00	52	75	46	43
Thursday, October 1, 2020	3:00	55	80	49	46
Thursday, October 1, 2020	4:00	58	79	50	46
Thursday, October 1, 2020	5:00	64	92	54	52
Thursday, October 1, 2020	6:00	64	86	56	53
Thursday, October 1, 2020	7:00	65	85	58	53
Thursday, October 1, 2020	8:00	65	81	58	50
Thursday, October 1, 2020	9:00	66	90	58	49
Thursday, October 1, 2020	10:00	67	88	58	45
Thursday, October 1, 2020	11:00	66	85	57	45
Thursday, October 1, 2020	12:00	68	87	60	49
Thursday, October 1, 2020	13:00	67	87	59	48
Thursday, October 1, 2020	14:00	69	97	60	49
Thursday, October 1, 2020	15:00	67	90	59	48
Thursday, October 1, 2020	16:00	68	88	61	51
Thursday, October 1, 2020	17:00	68	91	61	51
Thursday, October 1, 2020	18:00	67	89	61	52
Thursday, October 1, 2020	19:00	70	95	61	54
Thursday, October 1, 2020	20:00	66	82	58	53
Thursday, October 1, 2020	21:00	66	94	55	51
Thursday, October 1, 2020	22:00	64	80	55	50
Thursday, October 1, 2020	23:00	64	92	49	46

Statistics	Leq	Lmax	L50	L90
Day Average	67	89	59	50
Night Average	61	82	51	47
Day Low	65	81	55	45
Day High	70	97	61	54
Night Low	52	75	46	43
Night High	64	92	56	53
Ldn	68.6	Day %		89
CNEL	69	Night %		11



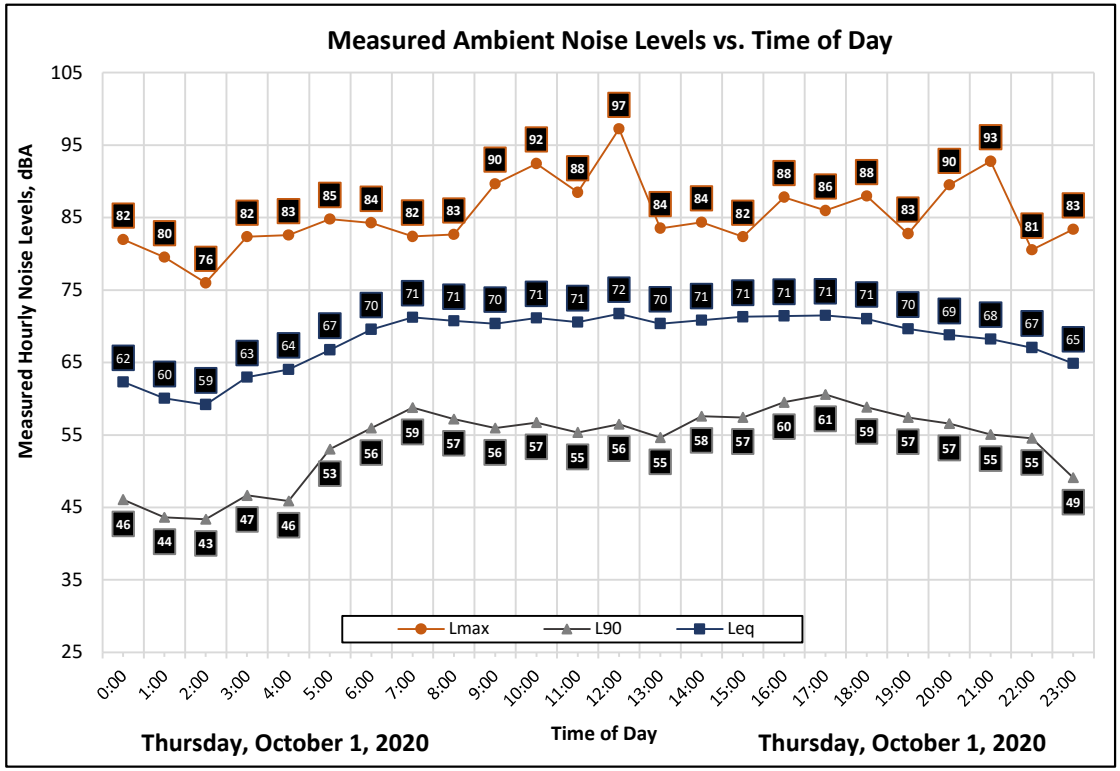


Appendix B1: Continuous Noise Monitoring Results

Site: LT-2
Project: Sheldon Grove
Location: Sheldon Road
Coordinates: 38.4381475°, -121.3887515°
Meter: LDL 820-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, October 1, 2020	0:00	62	82	53	46
Thursday, October 1, 2020	1:00	60	80	48	44
Thursday, October 1, 2020	2:00	59	76	49	43
Thursday, October 1, 2020	3:00	63	82	52	47
Thursday, October 1, 2020	4:00	64	83	54	46
Thursday, October 1, 2020	5:00	67	85	61	53
Thursday, October 1, 2020	6:00	70	84	66	56
Thursday, October 1, 2020	7:00	71	82	69	59
Thursday, October 1, 2020	8:00	71	83	68	57
Thursday, October 1, 2020	9:00	70	90	67	56
Thursday, October 1, 2020	10:00	71	92	68	57
Thursday, October 1, 2020	11:00	71	88	68	55
Thursday, October 1, 2020	12:00	72	97	68	56
Thursday, October 1, 2020	13:00	70	84	67	55
Thursday, October 1, 2020	14:00	71	84	69	58
Thursday, October 1, 2020	15:00	71	82	69	57
Thursday, October 1, 2020	16:00	71	88	69	60
Thursday, October 1, 2020	17:00	71	86	70	61
Thursday, October 1, 2020	18:00	71	88	69	59
Thursday, October 1, 2020	19:00	70	83	67	57
Thursday, October 1, 2020	20:00	69	90	65	57
Thursday, October 1, 2020	21:00	68	93	64	55
Thursday, October 1, 2020	22:00	67	81	63	55
Thursday, October 1, 2020	23:00	65	83	58	49

Statistics	Leq	Lmax	L50	L90
Day Average	71	87	68	57
Night Average	65	82	56	49
Day Low	68	82	64	55
Day High	72	97	70	61
Night Low	59	76	48	43
Night High	70	85	66	56
Ldn	72.5	Day %		88
CNEL	73	Night %		12



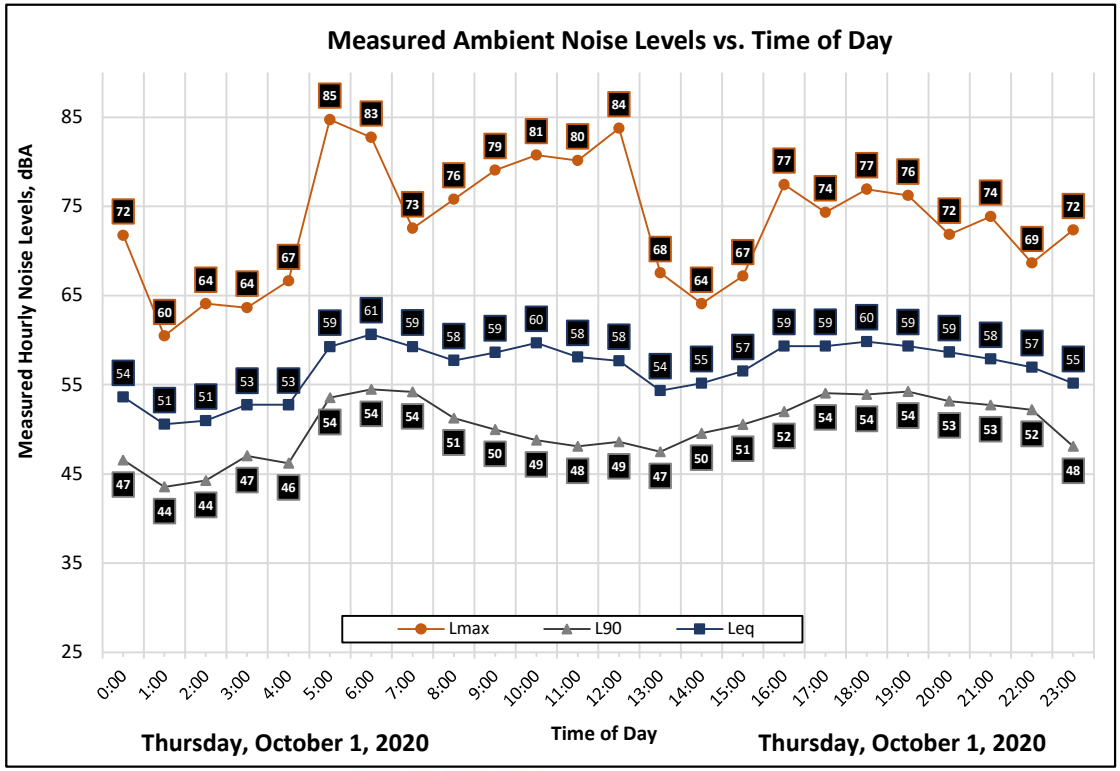


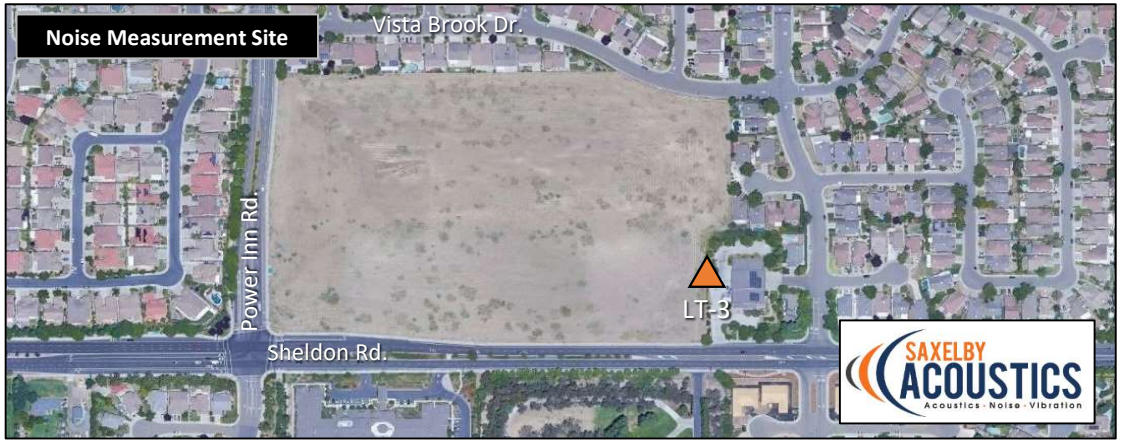
Appendix B1: Continuous Noise Monitoring Results

Site: LT-3
Project: Sheldon Grove
Meter: LDL 812-2
Location: Fire Station
Calibrator: CAL200
Coordinates: 38.4386315°, -121.3880806°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, October 1, 2020	0:00	54	72	52	47
Thursday, October 1, 2020	1:00	51	60	49	44
Thursday, October 1, 2020	2:00	51	64	49	44
Thursday, October 1, 2020	3:00	53	64	52	47
Thursday, October 1, 2020	4:00	53	67	51	46
Thursday, October 1, 2020	5:00	59	85	57	54
Thursday, October 1, 2020	6:00	61	83	58	54
Thursday, October 1, 2020	7:00	59	73	58	54
Thursday, October 1, 2020	8:00	58	76	56	51
Thursday, October 1, 2020	9:00	59	79	56	50
Thursday, October 1, 2020	10:00	60	81	55	49
Thursday, October 1, 2020	11:00	58	80	55	48
Thursday, October 1, 2020	12:00	58	84	55	49
Thursday, October 1, 2020	13:00	54	68	53	47
Thursday, October 1, 2020	14:00	55	64	54	50
Thursday, October 1, 2020	15:00	57	67	56	51
Thursday, October 1, 2020	16:00	59	77	57	52
Thursday, October 1, 2020	17:00	59	74	59	54
Thursday, October 1, 2020	18:00	60	77	59	54
Thursday, October 1, 2020	19:00	59	76	58	54
Thursday, October 1, 2020	20:00	59	72	58	53
Thursday, October 1, 2020	21:00	58	74	57	53
Thursday, October 1, 2020	22:00	57	69	56	52
Thursday, October 1, 2020	23:00	55	72	53	48

Statistics	Leq	Lmax	L50	L90
Day Average	58	75	56	51
Night Average	56	71	53	48
Day Low	54	64	53	47
Day High	60	84	59	54
Night Low	51	60	49	44
Night High	61	85	58	54
Ldn	62.4	Day %		76
CNEL	63	Night %		24





Appendix C: Traffic Noise Calculation Inputs and Results



Appendix C-1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200807
Description: Sheldon Grove - Existing Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Power Inn	South of Villenueve Drive	13,990	89	0	11	1.0%	1.0%	30	50	0	93	43	20	64.1
2	Sheldon	East of Power Inn	26,810	88	0	12	1.0%	1.0%	40	90	0	216	100	47	65.7

Appendix C-2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200807
Description: Sheldon Grove - Existing Plus Project Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Power Inn	South of Villenueve Drive	14,060	89	0	11	1.0%	1.0%	30	50	0	93	43	20	64.1
2	Sheldon	East of Power Inn	27,580	88	0	12	1.0%	1.0%	40	90	0	220	102	47	65.8

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Appendix C-3

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200807
Description: Sheldon Grove - Cumulative No On-Site Development
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Power Inn	South of Villenueve Drive	18,000	89	0	11	1.0%	1.0%	30	50	0	110	51	24	65.1
2	Sheldon	East of Power Inn	28,230	88	0	12	1.0%	1.0%	40	90	0	224	104	48	65.9

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Appendix C-4

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200807

Description: Sheldon Grove - Cumulative with On-Site Commerical Development

Ldn/CNEL: Ldn

Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Power Inn	South of Villenueve Drive	18,000	89	0	11	1.0%	1.0%	30	50	0	110	51	24	65.1
2	Sheldon	East of Power Inn	31,200	88	0	12	1.0%	1.0%	40	90	0	239	111	51	66.4
3	0	0	0	0	0		0.0%	0.0%	0	0	0				
4	0	0	0	0	0		0.0%	0.0%	0	0	0				
5	0	0	0	0	0		0.0%	0.0%	0	0	0				

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Appendix C-5

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 200807
Description: Sheldon Grove - Cumulative Plus
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Power Inn	South of Villenueve Drive	18,000	89	0	11	1.0%	1.0%	30	50	0	110	51	24	65.1
2	Sheldon	East of Power Inn	29,000	88	0	12	1.0%	1.0%	40	90	0	228	106	49	66.0

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Appendix D-1
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Noise Barrier Calculation: Data Input Sheet

Project #: 200807
Description: Sheldon Grove
Ldn/CNEL: Ldn
Hard/Soft: Soft

											Distance to Noise Contours		
Segment	Roadway Name	Segment Description	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Level, dBA	70 dB	65 dB	60 dB
1	Power Inn Road	North of Sheldon Road	18,000	89	11	1	1	52	70		68.3	54	116	250
2	Sheldon Road	East of Power Inn Road	29,000	88	12	1	1	42.5	50		70.2	51	110	238

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Appendix D-2
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 200807
Description Sheldon Grove
Roadway Name: Power Inn Road
Location(s): 1

Noise Level Data:

Year: 2041
Auto L_{dn}, dB: 67
Medium Truck L_{dn}, dB: 55
Heavy Truck L_{dn}, dB: 59

Site Geometry:

Receiver Description: North of Sheldon Road
Centerline to Barrier Distance (C_1): 60
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 2
Medium Truck Elevation: 4
Heavy Truck Elevation: 10
Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 6

Barrier Effectiveness:

		---------- L_{dn}, dB ----------				Barrier Breaks Line of Sight to…		
Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	61	49	54	62	Yes	Yes	Yes
7	7	60	48	53	61	Yes	Yes	Yes
8	8	58	46	52	59	Yes	Yes	Yes
9	9	57	45	50	58	Yes	Yes	Yes
10	10	56	44	49	57	Yes	Yes	Yes
11	11	55	43	48	56	Yes	Yes	Yes
12	12	54	42	47	55	Yes	Yes	Yes
13	13	53	41	46	54	Yes	Yes	Yes
14	14	53	40	45	54	Yes	Yes	Yes

Notes: [1] Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s).

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Appendix D-3
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Barrier Effectiveness Prediction Worksheet

Project Information:

Job Number: 200807
Description Sheldon Grove
Roadway Name: Sheldon Road
Location(s): 2

Noise Level Data:

Year: 2041
Auto L_{dn}, dB: 69
Medium Truck L_{dn}, dB: 58
Heavy Truck L_{dn}, dB: 60

Site Geometry:

Receiver Description: East of Power Inn Road
Centerline to Barrier Distance (C_1): 52
Barrier to Receiver Distance (C_2): 10
Automobile Elevation: 2
Medium Truck Elevation: 4
Heavy Truck Elevation: 10
Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 6

Barrier Effectiveness:

		---------- L_{dn}, dB ----------				Barrier Breaks Line of Sight to…		
Top of Barrier Elevation (ft)	Barrier Height[2] (ft)	Autos	Medium Trucks	Heavy Trucks	Total	Autos?	Medium Trucks?	Heavy Trucks?
6	6	63	52	55	64	Yes	Yes	Yes
7	7	62	51	54	63	Yes	Yes	Yes
8	8	60	49	52	61	Yes	Yes	Yes
9	9	59	48	51	60	Yes	Yes	Yes
10	10	58	47	50	59	Yes	Yes	Yes
11	11	57	46	49	58	Yes	Yes	Yes
12	12	56	45	48	57	Yes	Yes	Yes
13	13	55	44	47	56	Yes	Yes	Yes
14	14	55	43	46	56	Yes	Yes	Yes

Notes: [1] Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s).

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APPENDIX G

REVISED VMT EVALUATION MEMORANDUM

Kimley»Horn

Memorandum

To: Angelo G. Tsakopoulos

From: Chris Gregerson, P.E., T.E., PTOE, PTP
Matt Weir, P.E., T.E., PTOE

Re: Sheldon Grove
Revised Vehicle Miles Traveled (VMT) Evaluation & Intersection Operations

Date: September 8, 2020

As requested, we have prepared this memorandum to provide supplemental Vehicle Miles Traveled (VMT) data and focused intersection operations results for your residential development project located in the northeast corner of the Sheldon Road intersection with Power Inn Road in Elk Grove. These supplemental findings were prepared in a manner consistent with the City's requirements[1].

Supplemental VMT Evaluation

Kimley-Horn previously prepared a VMT Evaluation for the proposed project[2]. The primary purpose of this evaluation was to document the project's VMT per capita and compare the findings against the City's established thresholds[3].

The purpose of this supplemental VMT evaluation is to determine if the project's proposed rezone from commercial to residential will result in a net increase for the City's VMT cap. This evaluation was completed using a methodology consistent with the previously completed analysis[2] and the City's guidelines[3]. However, while the prior analysis evaluated the VMT impact related to the proposed project, this supplemental evaluation focuses on evaluating the project location as it is currently zoned for commercial (retail) development.

Kimley-Horn used the City's General Plan travel demand model to perform the VMT analysis. A Traffic Analysis Zone (TAZ) was created to isolate the proposed project from the surrounding land uses. A total of 380 jobs were added to the project's TAZ to represent the original zoning (commercial). This assumption was determined using the square foot-to-employee ratio developed using the *Trip Generation Manual, 10th Edition,* published by the Institute of Transportation Engineers (ITE). The ratio developed resulted in 2 employees for every 1,000 square-feet. As the project location was previously planned to include approximately 190,000 square-feet of commercial uses (an approximate FAR of 0.22), 380 jobs were estimated for the proposed project. Using the distribution of jobs for commercial parcels in the area surrounding the project, 21 food-related jobs, 190 retail-related jobs, and 169 service-related jobs (as defined by the City's General Plan travel demand model) were estimated for the proposed project. Using the output trip table from the travel demand model, automobile trips either starting or ending in the proposed project were selected. Trips were then factored based on auto occupancy; single occupancy trips were multiplied by one, two-person vehicle trips were multiplied by 0.5, and three or more person trips were multiplied by 0.3 in a manner consistent with the City's guidelines. Each trip was then multiplied by the model-determined distance based on the model's skim matrix determining the distance between each TAZ during the peak periods to determine that trip's VMT. Each trip's VMT was totaled to determine the total internal-internal VMT related to the proposed project.

[1] Per telephone conversation with Ryan Chapman, City of Elk Grove, August 25, 2020.
[2] *Sheldon Grove Vehicle Miles Traveled (VMT) Evaluation Memorandum*, Kimley-Horn, July 24, 2020.
[3] *Transportation Analysis Guidelines,* City of Elk Grove, adopted February 2019.

External-internal and internal-external VMT was also calculated based on the methodologies outlined in the City's guidelines. The script file provided by the City was used and determined the VMT for trips that either start or end outside of the model area by TAZ. As the project was separated into its own TAZ, the VMT for the project's TAZ was added to the internal-internal total VMT to determine the total VMT associated with the proposed project.

As shown in **Table 1**, the proposed project (residential) results in a total VMT of 5,608 daily vehicle-miles. However, as shown in **Table 2,** the original zoning of the proposed project (commercial) results in a total VMT of 13,430 daily vehicle-miles. This finding represents an increase of 7,822 daily vehicle-miles compared to the currently proposed project. Therefore, ***the project is expected to result in a net reduction of VMT and is not expected to result in exceeding the City's VMT cap.***

Table 1 – Proposed Project **(Residential)** VMT Analysis Results Summary

Trip Type	Internal VMT	External VMT	Total VMT
Origin	2,586	262	2,848
Destination	2,502	258	2,760
Total	**5,088**	**521**	**5,608**

Table 2 – Original Zoning **(Commercial)** VMT Analysis Results Summary

Trip Type	Internal VMT	External VMT	Total VMT
Origin	5,377	1,201	6,577
Destination	5,657	1,196	6,853
Total	**11,033**	**2,397**	**13,430**

Sheldon/Power Inn Intersection Evaluation

Kimley-Horn previously prepared an evaluation of the project's full access driveway along Sheldon Road[4]. This prior effort included documentation of the foundational aspects of the proposed project (i.e., trip generation and distribution, project frontage operations/geometrics, etc.), all of which are incorporated by reference.

According to the City's *General Plan*[5], performance targets have been established for various intersection control types. Per the City's request, this evaluation is focused on the Sheldon Road intersection with Power Inn Road/Garrity Drive, and only on the Existing and Existing plus Project Conditions. As shown in **Table 3**, the addition of the proposed project results in AM peak-hour intersection delay (60.1 seconds) that exceeds the established performance target (less than 55.1 seconds).

Table 3 – Intersection Performance Target Evaluation

Intersection	Control	Peak Hour	Existing	Existing plus Sheldon Grove	Existing plus Sheldon Grove (Modified)
			Delay (sec)	Delay (sec)	Delay (sec)
Sheldon Rd @ Power Inn Rd/Garrity Dr	Signal	AM	53.5	**60.1**	46.2
		PM	19.8	22.3	16.9

Note: **Bold** represents operations that exceed the intersection control performance target (less than 55.1 seconds for signalized control) noted in the City's *General Plan* (Adopted February 27, 2019).

[4] *Sheldon/Power Inn Residential Development Access Evaluation*, Kimley-Horn, May 29, 2020.
[5] *Elk Grove General Plan*, Table 6-3, City of Elk Grove, February 27, 2019.

The following traffic signal modification was determined to allow the intersection to operate within the performance target during both peak-hours:

- Addition of a southbound right-turn overlap signal phase
- Restriction of the eastbound u-turn movement (to avoid conflict with the southbound right-turn overlap)

This modification is considered to be a viable solution considering the complementary eastbound left-turn and southbound right-turn volumes (heavy and approximately equal), the virtually non-existent eastbound u-turn volume (1 AM and 2 PM peak-hour movements previously observed), and the noted school-peak congestion that occurs at this location that could benefit from this operational improvement. As shown in Table 3, these modifications result intersection delay that is less than 55.1 seconds. Analysis worksheets for the modified conditions are included as Appendix A to this memorandum.

Attachment:

Appendix A – Intersection Performance Target Analysis Worksheets

Appendix A

Intersection Performance Target Analysis Worksheets

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6834	6912	6903	6962	7012	6901	7077
Vehs Exited	6784	6739	6790	6829	6912	6728	6900
Starting Vehs	321	325	320	327	331	313	307
Ending Vehs	371	498	433	460	431	486	484
Travel Distance (mi)	6010	6100	6085	6075	6141	6033	6097
Travel Time (hr)	382.4	445.5	426.5	444.5	415.6	441.8	466.3
Total Delay (hr)	201.2	262.2	243.5	261.7	230.4	260.4	282.5
Total Stops	14991	16353	16089	16518	16243	16642	16908
Fuel Used (gal)	267.8	284.1	280.2	283.6	279.5	282.1	289.1

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7083	7015	7087	6975
Vehs Exited	6867	6959	6937	6844
Starting Vehs	335	326	361	323
Ending Vehs	551	382	511	457
Travel Distance (mi)	6113	6252	6188	6109
Travel Time (hr)	499.8	465.7	514.0	450.2
Total Delay (hr)	315.0	277.9	328.2	266.3
Total Stops	17993	17027	17881	16666
Fuel Used (gal)	297.3	294.2	303.1	286.1

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1634	1603	1633	1653	1641	1582	1657
Vehs Exited	1649	1614	1576	1612	1641	1533	1606
Starting Vehs	321	325	320	327	331	313	307
Ending Vehs	306	314	377	368	331	362	358
Travel Distance (mi)	1437	1445	1446	1487	1436	1416	1454
Travel Time (hr)	83.8	82.9	86.7	88.5	84.9	84.1	86.2
Total Delay (hr)	40.2	39.5	43.1	43.8	41.7	41.7	42.6
Total Stops	3297	3185	3424	3528	3412	3380	3375
Fuel Used (gal)	62.4	62.0	63.1	65.2	62.8	61.5	63.7

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1656	1576	1653	1627
Vehs Exited	1627	1581	1671	1611
Starting Vehs	335	326	361	323
Ending Vehs	364	321	343	345
Travel Distance (mi)	1467	1418	1505	1451
Travel Time (hr)	93.6	83.5	91.5	86.6
Total Delay (hr)	49.3	41.0	46.6	43.0
Total Stops	3551	3258	3637	3406
Fuel Used (gal)	65.7	61.5	66.5	63.4

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2032	2033	1984	2063	2061	2041	2112
Vehs Exited	1864	1829	1819	1914	1899	1864	1860
Starting Vehs	306	314	377	368	331	362	358
Ending Vehs	474	518	542	517	493	539	610
Travel Distance (mi)	1594	1628	1573	1635	1634	1623	1644
Travel Time (hr)	103.6	113.5	116.7	116.8	111.9	114.2	125.8
Total Delay (hr)	55.4	64.5	69.5	67.5	62.5	65.1	76.3
Total Stops	4163	4526	4424	4509	4391	4443	4725
Fuel Used (gal)	71.8	75.0	73.9	75.5	74.7	75.2	77.8

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2106	2167	2143	2074
Vehs Exited	1890	1877	1883	1868
Starting Vehs	364	321	343	345
Ending Vehs	580	611	603	546
Travel Distance (mi)	1660	1688	1664	1634
Travel Time (hr)	134.5	129.6	132.1	119.9
Total Delay (hr)	84.2	78.8	82.0	70.6
Total Stops	4999	4832	4691	4569
Fuel Used (gal)	80.5	80.6	80.1	76.5

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1587	1691	1611	1618	1702	1636	1638
Vehs Exited	1705	1714	1736	1685	1733	1705	1759
Starting Vehs	474	518	542	517	493	539	610
Ending Vehs	356	495	417	450	462	470	489
Travel Distance (mi)	1526	1543	1539	1511	1603	1515	1530
Travel Time (hr)	106.0	124.1	113.8	127.3	115.8	122.8	135.4
Total Delay (hr)	60.2	77.8	67.6	81.9	67.8	77.3	89.1
Total Stops	4041	4371	4035	4327	4459	4380	4492
Fuel Used (gal)	69.9	74.6	72.4	74.2	74.7	73.6	76.6

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1634	1639	1673	1640
Vehs Exited	1708	1784	1712	1722
Starting Vehs	580	611	603	546
Ending Vehs	506	466	564	460
Travel Distance (mi)	1520	1583	1508	1538
Travel Time (hr)	142.5	142.5	151.6	128.2
Total Delay (hr)	96.8	95.1	106.3	82.0
Total Stops	4801	4807	4805	4450
Fuel Used (gal)	78.0	80.2	79.8	75.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1581	1585	1675	1628	1608	1642	1670
Vehs Exited	1566	1582	1659	1618	1639	1626	1675
Starting Vehs	356	495	417	450	462	470	489
Ending Vehs	371	498	433	460	431	486	484
Travel Distance (mi)	1454	1484	1528	1441	1468	1479	1469
Travel Time (hr)	89.0	124.9	109.3	111.9	103.0	120.7	118.9
Total Delay (hr)	45.4	80.5	63.3	68.5	58.5	76.3	74.5
Total Stops	3490	4271	4206	4154	3981	4439	4316
Fuel Used (gal)	63.7	72.5	70.8	68.7	67.4	71.9	71.1

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1687	1633	1618	1632
Vehs Exited	1642	1717	1671	1640
Starting Vehs	506	466	564	460
Ending Vehs	551	382	511	457
Travel Distance (mi)	1466	1563	1511	1486
Travel Time (hr)	129.2	110.0	138.7	115.6
Total Delay (hr)	84.7	63.0	93.3	70.8
Total Stops	4642	4130	4748	4233
Fuel Used (gal)	73.1	71.8	76.7	70.8

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.3	4.0	0.0	0.0	0.0
Total Delay (hr)	11.4	6.6	0.1	0.2	19.9	0.7	0.5	0.9	0.1	2.3	0.4	15.9
Total Del/Veh (s)	75.2	25.5	7.3	58.5	55.5	14.8	59.4	36.1	10.8	55.0	31.2	91.2
Stop Delay (hr)	9.6	3.9	0.0	0.1	17.0	0.5	0.5	0.8	0.1	2.1	0.3	14.3
Stop Del/Veh (s)	63.2	15.2	1.9	53.8	47.5	11.3	56.6	32.4	9.8	50.6	26.7	82.3

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	58.9
Total Del/Veh (s)	53.5
Stop Delay (hr)	49.4
Stop Del/Veh (s)	44.9

Total Zone Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.6
Total Delay (hr)	58.9
Total Del/Veh (s)	1493.1
Stop Delay (hr)	49.4
Stop Del/Veh (s)	1251.8

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	B34	B34
Directions Served	L	L	T	T	R	L	T	T	T	R	T	T
Maximum Queue (ft)	392	463	377	483	52	141	377	346	375	286	587	615
Average Queue (ft)	219	235	172	186	12	19	283	259	299	164	187	210
95th Queue (ft)	377	452	340	390	34	95	415	354	410	358	664	691
Link Distance (ft)		1399	1399	1399			286	286	286		764	764
Upstream Blk Time (%)						0	20	10	25	1	6	8
Queuing Penalty (veh)						0	101	48	124	0	41	57
Storage Bay Dist (ft)	400				390	210				180		
Storage Blk Time (%)	3	3		0			31		47			
Queuing Penalty (veh)	7	7		0			4		83			

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	B31	B31	NB	NB	NB	SB	SB	SB	SB
Directions Served	T	T	L	T	R	L	L	T	R
Maximum Queue (ft)	82	85	94	137	66	115	136	834	922
Average Queue (ft)	26	28	26	52	10	49	68	235	534
95th Queue (ft)	165	171	64	107	37	101	115	830	1046
Link Distance (ft)	279	279		867				938	938
Upstream Blk Time (%)	2	2						1	8
Queuing Penalty (veh)	12	17						5	33
Storage Bay Dist (ft)			100		100	225	225		
Storage Blk Time (%)			0	2	0				
Queuing Penalty (veh)			0	1	0				

Zone Summary

Zone wide Queuing Penalty: 540

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6995	6878	7076	7006	6915	6835	6805
Vehs Exited	6924	6734	6984	6938	6856	6647	6760
Starting Vehs	360	313	343	325	381	325	351
Ending Vehs	431	457	435	393	440	513	396
Travel Distance (mi)	6256	6035	6213	6261	6164	6100	6038
Travel Time (hr)	454.4	433.1	477.7	406.3	506.6	578.6	482.1
Total Delay (hr)	269.7	254.5	293.7	221.7	324.6	399.0	303.8
Total Stops	14970	14462	15180	14312	15055	15100	13936
Fuel Used (gal)	290.5	279.5	294.5	279.5	299.8	314.6	289.9

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7097	6924	7208	6976
Vehs Exited	6895	6871	7053	6864
Starting Vehs	343	342	344	337
Ending Vehs	545	395	499	443
Travel Distance (mi)	6234	6133	6396	6183
Travel Time (hr)	455.5	472.0	472.8	473.9
Total Delay (hr)	270.9	290.5	284.1	291.2
Total Stops	15152	14568	15347	14808
Fuel Used (gal)	290.6	290.4	299.2	292.8

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1760	1741	1792	1696	1695	1702	1767
Vehs Exited	1731	1655	1748	1719	1713	1639	1742
Starting Vehs	360	313	343	325	381	325	351
Ending Vehs	389	399	387	302	363	388	376
Travel Distance (mi)	1521	1507	1592	1539	1518	1535	1564
Travel Time (hr)	89.6	87.3	98.6	85.6	92.1	92.1	99.9
Total Delay (hr)	44.5	42.4	51.7	40.1	47.2	47.1	53.7
Total Stops	3567	3443	3817	3376	3372	3356	3801
Fuel Used (gal)	66.1	64.6	70.1	66.0	66.3	66.9	69.9

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1682	1755	1856	1741
Vehs Exited	1654	1731	1769	1709
Starting Vehs	343	342	344	337
Ending Vehs	371	366	431	367
Travel Distance (mi)	1522	1535	1633	1546
Travel Time (hr)	89.8	89.7	95.1	92.0
Total Delay (hr)	44.7	44.1	47.1	46.2
Total Stops	3549	3604	3650	3553
Fuel Used (gal)	66.2	66.6	70.8	67.4

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1970	1867	1995	1954	1929	1915	1827
Vehs Exited	1875	1817	1891	1799	1808	1818	1794
Starting Vehs	389	399	387	302	363	388	376
Ending Vehs	484	449	491	457	484	485	409
Travel Distance (mi)	1698	1580	1649	1650	1611	1634	1592
Travel Time (hr)	109.2	99.5	109.6	100.8	116.0	124.4	109.9
Total Delay (hr)	59.1	52.7	60.8	52.4	68.2	76.2	63.1
Total Stops	3998	3722	3780	3816	4062	4098	3654
Fuel Used (gal)	75.8	70.4	74.2	72.2	75.0	77.8	72.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2038	2035	2020	1955
Vehs Exited	1924	1958	1946	1863
Starting Vehs	371	366	431	367
Ending Vehs	485	443	505	458
Travel Distance (mi)	1678	1730	1709	1653
Travel Time (hr)	116.3	117.9	121.6	112.5
Total Delay (hr)	66.4	66.8	71.1	63.7
Total Stops	4084	4269	4238	3970
Fuel Used (gal)	76.9	78.9	79.6	75.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1660	1741	1718	1654	1648	1645	1697
Vehs Exited	1718	1754	1710	1704	1654	1616	1646
Starting Vehs	484	449	491	457	484	485	409
Ending Vehs	426	436	499	407	478	514	460
Travel Distance (mi)	1543	1563	1543	1525	1529	1485	1487
Travel Time (hr)	114.4	110.4	124.9	102.5	133.6	161.7	122.8
Total Delay (hr)	68.7	64.3	79.1	57.5	88.5	118.1	78.8
Total Stops	3759	3868	3898	3373	3764	3733	3414
Fuel Used (gal)	71.8	72.4	74.8	68.3	76.0	81.4	71.9

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1718	1558	1705	1675
Vehs Exited	1741	1582	1727	1687
Starting Vehs	485	443	505	458
Ending Vehs	462	419	483	451
Travel Distance (mi)	1586	1441	1589	1529
Travel Time (hr)	116.6	126.7	120.7	123.4
Total Delay (hr)	69.9	84.1	73.9	78.3
Total Stops	3854	3467	3817	3691
Fuel Used (gal)	74.1	71.2	74.7	73.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1605	1529	1571	1702	1643	1573	1514
Vehs Exited	1600	1508	1635	1716	1681	1574	1578
Starting Vehs	426	436	499	407	478	514	460
Ending Vehs	431	457	435	393	440	513	396
Travel Distance (mi)	1494	1385	1430	1547	1506	1446	1396
Travel Time (hr)	141.2	135.9	144.6	117.4	164.9	200.4	149.5
Total Delay (hr)	97.4	95.1	102.1	71.6	120.6	157.6	108.2
Total Stops	3646	3429	3685	3747	3857	3913	3067
Fuel Used (gal)	76.8	72.1	75.4	72.9	82.4	88.4	75.8

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1659	1576	1627	1596
Vehs Exited	1576	1600	1611	1607
Starting Vehs	462	419	483	451
Ending Vehs	545	395	499	443
Travel Distance (mi)	1448	1427	1465	1454
Travel Time (hr)	132.9	137.7	135.4	146.0
Total Delay (hr)	89.9	95.5	92.0	103.0
Total Stops	3665	3228	3642	3586
Fuel Used (gal)	73.4	73.7	74.1	76.5

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	4.0	0.1	4.3	0.0	0.0	0.0
Total Delay (hr)	3.3	6.5	0.1	0.3	5.7	0.2	0.1	0.1	0.0	1.4	0.1	1.8
Total Del/Veh (s)	35.0	18.9	9.4	41.5	17.2	5.1	38.4	46.2	13.0	27.5	15.4	16.9
Stop Delay (hr)	2.7	2.3	0.0	0.2	4.0	0.1	0.1	0.1	0.0	1.2	0.1	1.4
Stop Del/Veh (s)	28.4	6.7	1.4	38.6	12.1	3.9	36.8	42.9	13.3	24.5	12.8	13.7

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	19.5
Total Del/Veh (s)	19.8
Stop Delay (hr)	12.3
Stop Del/Veh (s)	12.5

Total Zone Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	1.8
Total Delay (hr)	19.5
Total Del/Veh (s)	1431.3
Stop Delay (hr)	12.3
Stop Del/Veh (s)	905.8

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	178	182	489	494	38	85	275	254	249	124	45	24
Average Queue (ft)	86	100	145	158	7	22	149	129	128	37	11	4
95th Queue (ft)	154	160	303	319	24	63	240	221	216	85	34	18
Link Distance (ft)		1399	1399	1399			286	286	286			867
Upstream Blk Time (%)			0	0		0	0	0	0	0		
Queuing Penalty (veh)			0	0		0	0	0	0	0		
Storage Bay Dist (ft)	400				390	210				180	100	
Storage Blk Time (%)				0			2		3			
Queuing Penalty (veh)				0			0		3			

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	L	T	R
Maximum Queue (ft)	18	93	106	31	265
Average Queue (ft)	5	40	53	7	118
95th Queue (ft)	17	78	91	24	213
Link Distance (ft)				938	938
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100	225	225		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 4

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7181	7139	7173	7095	7031	7230	7216
Vehs Exited	6972	6991	7036	6789	6820	6957	6940
Starting Vehs	369	361	408	367	395	343	307
Ending Vehs	578	509	545	673	606	616	583
Travel Distance (mi)	6084	6150	6199	5954	5889	6123	6108
Travel Time (hr)	505.9	439.3	505.5	640.8	521.0	541.8	503.3
Total Delay (hr)	322.5	254.3	319.3	461.3	342.7	357.5	319.5
Total Stops	18261	16894	18007	19928	17859	18161	18703
Fuel Used (gal)	298.8	286.0	303.4	324.4	296.1	307.4	298.3

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7081	7101	7216	7150
Vehs Exited	6751	7001	7114	6936
Starting Vehs	333	342	387	357
Ending Vehs	663	442	489	565
Travel Distance (mi)	5887	6081	6193	6067
Travel Time (hr)	637.7	448.7	519.2	526.3
Total Delay (hr)	460.2	265.1	332.2	343.5
Total Stops	19059	16681	18564	18207
Fuel Used (gal)	321.9	284.3	304.8	302.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1646	1677	1659	1702	1575	1694	1677
Vehs Exited	1647	1650	1724	1614	1627	1653	1642
Starting Vehs	369	361	408	367	395	343	307
Ending Vehs	368	388	343	455	343	384	342
Travel Distance (mi)	1480	1510	1557	1488	1435	1527	1502
Travel Time (hr)	93.7	93.4	100.4	102.8	87.7	96.4	89.3
Total Delay (hr)	49.2	48.2	53.9	58.0	44.2	50.8	44.3
Total Stops	3753	3752	3926	4142	3473	3740	3536
Fuel Used (gal)	66.0	67.7	69.6	68.1	63.8	68.1	65.4

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1696	1635	1724	1664
Vehs Exited	1599	1615	1665	1648
Starting Vehs	333	342	387	357
Ending Vehs	430	362	446	380
Travel Distance (mi)	1457	1444	1528	1493
Travel Time (hr)	98.2	83.5	100.9	94.6
Total Delay (hr)	54.1	40.0	55.0	49.8
Total Stops	3828	3239	3961	3731
Fuel Used (gal)	66.2	62.3	69.1	66.6

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2132	2172	2165	2189	2188	2180	2182
Vehs Exited	1991	2027	1967	1933	1959	1923	1937
Starting Vehs	368	388	343	455	343	384	342
Ending Vehs	509	533	541	711	572	641	587
Travel Distance (mi)	1611	1655	1647	1547	1627	1585	1622
Travel Time (hr)	118.8	121.9	123.8	154.5	128.9	133.2	128.7
Total Delay (hr)	70.0	71.9	74.3	107.6	79.7	85.1	79.8
Total Stops	4497	4615	4686	5355	4874	4642	4986
Fuel Used (gal)	75.8	78.3	78.3	81.6	79.0	77.9	78.5

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2120	2150	2221	2169
Vehs Exited	1822	1993	2092	1965
Starting Vehs	430	362	446	380
Ending Vehs	728	519	575	585
Travel Distance (mi)	1517	1636	1710	1616
Travel Time (hr)	156.4	127.4	139.9	133.3
Total Delay (hr)	110.5	77.6	88.2	84.5
Total Stops	5052	4890	5281	4885
Fuel Used (gal)	81.5	78.6	83.7	79.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1710	1608	1697	1602	1665	1674	1646
Vehs Exited	1632	1701	1692	1635	1661	1732	1689
Starting Vehs	509	533	541	711	572	641	587
Ending Vehs	587	440	546	678	576	583	544
Travel Distance (mi)	1465	1498	1492	1467	1438	1524	1494
Travel Time (hr)	143.9	111.1	133.3	191.7	149.9	155.3	143.6
Total Delay (hr)	99.8	65.9	88.3	147.7	106.3	109.5	98.6
Total Stops	4803	4197	4545	5160	4771	4848	5092
Fuel Used (gal)	77.0	70.0	76.6	87.3	77.0	81.2	77.6

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1653	1694	1640	1660
Vehs Exited	1729	1746	1702	1690
Starting Vehs	728	519	575	585
Ending Vehs	652	467	513	556
Travel Distance (mi)	1487	1559	1498	1492
Travel Time (hr)	189.2	125.6	142.7	148.6
Total Delay (hr)	144.5	78.8	97.6	103.7
Total Stops	5088	4357	4713	4756
Fuel Used (gal)	87.6	74.8	77.4	78.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1693	1682	1652	1602	1603	1682	1711
Vehs Exited	1702	1613	1653	1607	1573	1649	1672
Starting Vehs	587	440	546	678	576	583	544
Ending Vehs	578	509	545	673	606	616	583
Travel Distance (mi)	1527	1487	1502	1453	1389	1487	1490
Travel Time (hr)	149.5	113.0	148.0	191.8	154.6	156.8	141.7
Total Delay (hr)	103.6	68.3	102.9	148.0	112.4	112.1	96.8
Total Stops	5208	4330	4850	5271	4741	4931	5089
Fuel Used (gal)	80.0	70.0	78.8	87.3	76.2	80.2	76.9

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1612	1622	1631	1652
Vehs Exited	1601	1647	1655	1634
Starting Vehs	652	467	513	556
Ending Vehs	663	442	489	565
Travel Distance (mi)	1426	1443	1457	1466
Travel Time (hr)	194.0	112.3	135.7	149.7
Total Delay (hr)	151.0	68.7	91.4	105.5
Total Stops	5091	4195	4609	4832
Fuel Used (gal)	86.7	68.6	74.5	77.9

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.5	10.9
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.3	3.9	52.3	45.8	62.2
Total Delay (hr)	11.1	7.3	0.1	0.2	25.5	0.9	0.5	1.0	0.1	2.4	0.3	16.1
Total Del/Veh (s)	72.1	27.8	7.5	59.2	74.4	19.2	67.9	37.6	12.4	57.8	30.6	92.6
Stop Delay (hr)	9.3	4.6	0.0	0.2	22.5	0.7	0.5	0.9	0.1	2.3	0.3	14.9
Stop Del/Veh (s)	60.8	17.4	2.1	54.7	65.6	15.3	65.2	33.8	11.3	54.1	27.4	85.8

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	13.7
Denied Del/Veh (s)	12.7
Total Delay (hr)	65.4
Total Del/Veh (s)	60.1
Stop Delay (hr)	56.2
Stop Del/Veh (s)	51.6

Total Zone Performance

Denied Delay (hr)	13.7
Denied Del/Veh (s)	226.3
Total Delay (hr)	65.4
Total Del/Veh (s)	1962.4
Stop Delay (hr)	56.2
Stop Del/Veh (s)	1685.2

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	B34	B34
Directions Served	L	L	T	T	R	L	T	T	T	R	T	T
Maximum Queue (ft)	352	368	380	389	49	248	379	343	379	286	380	382
Average Queue (ft)	218	224	191	201	13	23	321	277	332	211	208	237
95th Queue (ft)	346	350	348	360	35	121	428	348	422	392	474	491
Link Distance (ft)		1399	1399	1399			286	286	286		289	289
Upstream Blk Time (%)						0	33	15	47	1	20	34
Queuing Penalty (veh)						0	166	73	238	0	153	256
Storage Bay Dist (ft)	400				390	210				180		
Storage Blk Time (%)	0	1		0			45		67			
Queuing Penalty (veh)	1	2		0			5		120			

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	L	T	R
Maximum Queue (ft)	96	159	71	131	141	688	703
Average Queue (ft)	26	53	10	53	68	242	512
95th Queue (ft)	67	115	39	108	119	728	825
Link Distance (ft)		867				662	662
Upstream Blk Time (%)						2	20
Queuing Penalty (veh)						9	74
Storage Bay Dist (ft)	100		100	225	225		
Storage Blk Time (%)	0	2					
Queuing Penalty (veh)	0	1					

Zone Summary

Zone wide Queuing Penalty: 1100

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7076	7127	7144	7143	7104	7184	7178
Vehs Exited	6896	6967	6970	6935	6975	7020	6936
Starting Vehs	328	352	373	333	355	354	305
Ending Vehs	508	512	547	541	484	518	547
Travel Distance (mi)	6117	6115	6093	6097	6062	6134	6041
Travel Time (hr)	532.2	451.4	501.2	455.2	458.3	487.5	485.7
Total Delay (hr)	348.2	267.6	317.6	271.7	275.3	303.1	303.5
Total Stops	16474	16536	17860	16553	16296	16305	16846
Fuel Used (gal)	305.1	286.5	297.4	287.5	287.6	295.8	291.0

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7249	7107	7128	7145
Vehs Exited	7044	6982	6938	6966
Starting Vehs	353	338	331	332
Ending Vehs	558	463	521	518
Travel Distance (mi)	6167	6077	5960	6086
Travel Time (hr)	567.9	502.4	514.3	495.6
Total Delay (hr)	382.5	319.3	334.6	312.3
Total Stops	18351	16715	17322	16921
Fuel Used (gal)	314.1	298.2	296.7	296.0

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1734	1694	1632	1698	1598	1661	1704
Vehs Exited	1646	1672	1701	1660	1591	1657	1663
Starting Vehs	328	352	373	333	355	354	305
Ending Vehs	416	374	304	371	362	358	346
Travel Distance (mi)	1520	1513	1483	1515	1448	1465	1497
Travel Time (hr)	93.6	88.0	90.8	91.1	86.5	86.8	90.5
Total Delay (hr)	47.8	42.6	46.0	45.6	43.1	42.9	45.3
Total Stops	3623	3467	3650	3693	3444	3413	3611
Fuel Used (gal)	66.8	65.1	65.3	66.6	63.6	63.9	65.0

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1666	1676	1675	1675
Vehs Exited	1617	1653	1629	1649
Starting Vehs	353	338	331	332
Ending Vehs	402	361	377	363
Travel Distance (mi)	1445	1515	1456	1486
Travel Time (hr)	93.4	91.9	93.6	90.6
Total Delay (hr)	49.7	46.4	49.9	45.9
Total Stops	3678	3642	3702	3595
Fuel Used (gal)	64.0	67.1	65.3	65.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2041	2127	2167	2180	2150	2122	2142
Vehs Exited	1910	2013	1889	2031	2006	1984	1961
Starting Vehs	416	374	304	371	362	358	346
Ending Vehs	547	488	582	520	506	496	527
Travel Distance (mi)	1584	1648	1543	1670	1625	1611	1575
Travel Time (hr)	132.7	118.5	120.4	125.7	127.7	120.6	120.9
Total Delay (hr)	85.0	68.8	73.5	75.2	78.3	72.1	73.2
Total Stops	4332	4428	4601	4385	4479	4344	4447
Fuel Used (gal)	78.2	76.7	74.1	79.3	78.2	76.7	74.5

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2289	2174	2239	2161
Vehs Exited	2079	1966	2046	1989
Starting Vehs	402	361	377	363
Ending Vehs	612	569	570	537
Travel Distance (mi)	1727	1604	1613	1620
Travel Time (hr)	145.3	127.9	133.3	127.3
Total Delay (hr)	93.2	79.3	84.3	78.3
Total Stops	4931	4798	4835	4558
Fuel Used (gal)	84.9	78.0	79.1	78.0

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1714	1679	1658	1610	1693	1621	1674
Vehs Exited	1737	1708	1705	1698	1769	1616	1702
Starting Vehs	547	488	582	520	506	496	527
Ending Vehs	524	459	535	432	430	501	499
Travel Distance (mi)	1547	1526	1557	1497	1550	1468	1466
Travel Time (hr)	151.8	118.4	144.3	122.5	123.2	138.6	131.5
Total Delay (hr)	105.3	72.5	97.6	77.7	76.5	94.3	87.3
Total Stops	4337	4405	4821	4242	4030	4083	4324
Fuel Used (gal)	80.7	72.9	79.5	73.2	74.9	75.4	74.0

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1704	1685	1590	1663
Vehs Exited	1721	1751	1643	1705
Starting Vehs	612	569	570	537
Ending Vehs	595	503	517	493
Travel Distance (mi)	1534	1550	1459	1515
Travel Time (hr)	160.5	140.7	138.6	137.0
Total Delay (hr)	114.6	94.2	94.9	91.5
Total Stops	5111	4441	4539	4439
Fuel Used (gal)	82.5	78.6	75.9	76.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1587	1627	1687	1655	1663	1780	1658
Vehs Exited	1603	1574	1675	1546	1609	1763	1610
Starting Vehs	524	459	535	432	430	501	499
Ending Vehs	508	512	547	541	484	518	547
Travel Distance (mi)	1467	1428	1511	1416	1439	1591	1503
Travel Time (hr)	154.2	126.5	145.7	115.9	120.9	141.4	142.8
Total Delay (hr)	110.1	83.6	100.6	73.2	77.4	93.7	97.8
Total Stops	4182	4236	4788	4233	4343	4465	4464
Fuel Used (gal)	79.4	71.8	78.4	68.4	70.9	79.8	77.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1590	1572	1624	1644
Vehs Exited	1627	1612	1620	1624
Starting Vehs	595	503	517	493
Ending Vehs	558	463	521	518
Travel Distance (mi)	1461	1407	1432	1465
Travel Time (hr)	168.7	141.8	148.7	140.7
Total Delay (hr)	125.0	99.4	105.5	96.6
Total Stops	4631	3834	4246	4340
Fuel Used (gal)	82.7	74.6	76.5	76.0

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.7	13.8
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	3.9	0.3	3.9	77.9	65.9	86.4
Total Delay (hr)	6.5	3.7	0.1	0.1	17.1	0.8	0.5	1.2	0.1	1.9	0.4	17.8
Total Del/Veh (s)	42.3	14.1	6.6	48.6	47.3	17.1	62.8	44.1	10.6	48.4	44.7	115.1
Stop Delay (hr)	5.0	1.5	0.0	0.1	14.5	0.7	0.5	1.1	0.1	1.7	0.4	16.8
Stop Del/Veh (s)	32.7	6.0	1.4	44.8	40.0	13.7	59.7	39.5	9.4	44.2	40.1	108.4

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	17.7
Denied Del/Veh (s)	16.3
Total Delay (hr)	50.2
Total Del/Veh (s)	46.2
Stop Delay (hr)	42.3
Stop Del/Veh (s)	39.0

Total Zone Performance

Denied Delay (hr)	17.7
Denied Del/Veh (s)	284.9
Total Delay (hr)	50.2
Total Del/Veh (s)	1600.0
Stop Delay (hr)	42.3
Stop Del/Veh (s)	1348.2

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	B34	B34
Directions Served	L	L	T	T	R	L	T	T	T	R	T	T
Maximum Queue (ft)	296	317	285	287	41	202	359	314	376	286	370	377
Average Queue (ft)	151	156	102	110	9	17	238	237	289	167	102	141
95th Queue (ft)	269	282	226	238	29	84	383	344	426	362	345	403
Link Distance (ft)		1399	1399	1399			286	286	286		289	289
Upstream Blk Time (%)						0	7	4	32	1	4	18
Queuing Penalty (veh)						0	36	19	162	0	32	134
Storage Bay Dist (ft)	400				390	210				180		
Storage Blk Time (%)	0	1					16		54	0		
Queuing Penalty (veh)	1	2					2		97	0		

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	L	T	R
Maximum Queue (ft)	100	168	97	119	132	708	704
Average Queue (ft)	26	63	11	41	59	336	515
95th Queue (ft)	70	128	45	94	109	847	868
Link Distance (ft)		867				662	662
Upstream Blk Time (%)						8	33
Queuing Penalty (veh)						31	124
Storage Bay Dist (ft)	100		100	225	225		
Storage Blk Time (%)	1	4					
Queuing Penalty (veh)	1	2					

Zone Summary

Zone wide Queuing Penalty: 640

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7410	7404	7174	6973	7308	7420	7367
Vehs Exited	7355	7249	7116	6866	7136	7341	7151
Starting Vehs	341	341	427	352	324	345	339
Ending Vehs	396	496	485	459	496	424	555
Travel Distance (mi)	6425	6413	6367	6100	6289	6436	6353
Travel Time (hr)	423.7	463.2	487.5	592.4	483.6	448.8	542.3
Total Delay (hr)	232.8	272.7	299.5	411.9	297.4	258.0	354.4
Total Stops	15772	15887	15442	16066	15604	16115	16270
Fuel Used (gal)	291.2	298.7	301.7	318.2	299.3	298.1	315.3

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7121	7381	7202	7274
Vehs Exited	6951	7202	7078	7144
Starting Vehs	334	325	346	340
Ending Vehs	504	504	470	474
Travel Distance (mi)	6195	6412	6256	6325
Travel Time (hr)	558.1	522.5	511.1	503.3
Total Delay (hr)	374.5	332.6	325.6	315.9
Total Stops	16047	16360	15790	15937
Fuel Used (gal)	313.2	311.5	305.3	305.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1780	1784	1772	1721	1700	1688	1820
Vehs Exited	1751	1755	1842	1711	1657	1679	1715
Starting Vehs	341	341	427	352	324	345	339
Ending Vehs	370	370	357	362	367	354	444
Travel Distance (mi)	1550	1593	1602	1526	1514	1489	1586
Travel Time (hr)	87.7	93.4	97.1	97.7	83.0	84.6	94.7
Total Delay (hr)	41.7	46.1	49.6	52.5	38.4	40.4	47.9
Total Stops	3342	3743	3667	3609	3232	3419	3562
Fuel Used (gal)	66.6	69.0	70.5	68.0	64.5	64.2	68.9

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1751	1758	1769	1754
Vehs Exited	1705	1687	1762	1726
Starting Vehs	334	325	346	340
Ending Vehs	380	396	353	370
Travel Distance (mi)	1541	1535	1547	1548
Travel Time (hr)	94.0	89.2	99.2	92.1
Total Delay (hr)	48.1	44.0	53.1	46.2
Total Stops	3699	3399	3712	3540
Fuel Used (gal)	67.9	66.4	69.1	67.5

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2188	2205	2154	2113	2258	2266	2202
Vehs Exited	2092	2085	1994	1905	2070	2083	2101
Starting Vehs	370	370	357	362	367	354	444
Ending Vehs	466	490	517	570	555	537	545
Travel Distance (mi)	1719	1733	1738	1646	1739	1763	1734
Travel Time (hr)	117.7	122.4	119.3	139.7	123.5	122.5	135.4
Total Delay (hr)	66.3	70.4	67.9	90.7	71.8	70.1	83.8
Total Stops	4502	4635	4452	4543	4804	4799	4977
Fuel Used (gal)	79.5	80.9	79.4	81.5	80.8	82.2	84.2

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2181	2263	2202	2199
Vehs Exited	1995	2048	2044	2041
Starting Vehs	380	396	353	370
Ending Vehs	566	611	511	525
Travel Distance (mi)	1692	1764	1715	1724
Travel Time (hr)	131.0	137.5	121.0	127.0
Total Delay (hr)	80.6	84.5	69.8	75.6
Total Stops	4708	4970	4386	4675
Fuel Used (gal)	81.1	85.2	79.8	81.5

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1775	1786	1696	1618	1688	1738	1676
Vehs Exited	1803	1797	1739	1675	1770	1804	1729
Starting Vehs	466	490	517	570	555	537	545
Ending Vehs	438	479	474	513	473	471	492
Travel Distance (mi)	1633	1615	1594	1524	1566	1638	1579
Travel Time (hr)	112.0	117.4	118.4	168.1	128.2	120.0	143.8
Total Delay (hr)	63.7	69.9	71.4	123.2	81.8	71.8	97.3
Total Stops	4182	3826	3808	4240	4024	3994	3992
Fuel Used (gal)	74.9	74.9	74.5	84.1	76.2	76.5	80.3

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1570	1713	1636	1690
Vehs Exited	1685	1792	1680	1747
Starting Vehs	566	611	511	525
Ending Vehs	451	532	467	471
Travel Distance (mi)	1513	1617	1565	1584
Travel Time (hr)	145.0	137.2	127.7	131.8
Total Delay (hr)	100.5	89.8	81.7	85.1
Total Stops	3943	4101	3860	3993
Fuel Used (gal)	78.0	79.8	76.4	77.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1667	1629	1552	1521	1662	1728	1669
Vehs Exited	1709	1612	1541	1575	1639	1775	1606
Starting Vehs	438	479	474	513	473	471	492
Ending Vehs	396	496	485	459	496	424	555
Travel Distance (mi)	1523	1472	1433	1403	1471	1546	1454
Travel Time (hr)	106.3	130.1	152.7	186.9	148.9	121.6	168.4
Total Delay (hr)	61.0	86.2	110.6	145.5	105.4	75.7	125.4
Total Stops	3746	3683	3515	3674	3544	3903	3739
Fuel Used (gal)	70.2	73.9	77.3	84.7	77.7	75.2	81.9

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1619	1647	1595	1627
Vehs Exited	1566	1675	1592	1630
Starting Vehs	451	532	467	471
Ending Vehs	504	504	470	474
Travel Distance (mi)	1450	1495	1429	1468
Travel Time (hr)	188.1	158.6	163.2	152.5
Total Delay (hr)	145.3	114.2	120.9	109.0
Total Stops	3697	3890	3832	3721
Fuel Used (gal)	86.1	80.2	80.1	78.7

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.2	0.0	0.0	0.0	4.2	0.1	4.2	0.3	0.0	0.0
Total Delay (hr)	3.9	8.1	0.1	0.2	6.7	0.2	0.2	0.1	0.0	1.5	0.1	1.9
Total Del/Veh (s)	37.4	22.8	9.7	40.6	19.5	5.4	40.6	44.8	16.7	27.5	13.9	17.3
Stop Delay (hr)	3.1	3.3	0.0	0.2	4.8	0.1	0.2	0.1	0.0	1.4	0.1	1.6
Stop Del/Veh (s)	29.9	9.3	1.5	37.7	14.1	4.1	38.9	41.4	16.9	25.2	12.2	14.8

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	22.9
Total Del/Veh (s)	22.3
Stop Delay (hr)	14.9
Stop Del/Veh (s)	14.6

Total Zone Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.7
Total Delay (hr)	22.9
Total Del/Veh (s)	1555.6
Stop Delay (hr)	14.9
Stop Del/Veh (s)	1012.8

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	B34	NB
Directions Served	L	L	T	T	R	L	T	T	T	R	T	L
Maximum Queue (ft)	220	221	473	573	43	102	306	295	256	80	3	46
Average Queue (ft)	95	114	180	196	7	20	161	147	140	36	0	11
95th Queue (ft)	176	188	388	435	25	66	265	250	230	69	0	36
Link Distance (ft)		1399	1399	1399			286	286	286		289	
Upstream Blk Time (%)				0		0	1	0	0			
Queuing Penalty (veh)				0		0	3	1	0			
Storage Bay Dist (ft)	400				390	210				180		100
Storage Blk Time (%)				2			3		4			0
Queuing Penalty (veh)				1			1		4			0

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	R
Maximum Queue (ft)	30	24	122	128	37	296
Average Queue (ft)	5	5	47	60	5	130
95th Queue (ft)	21	18	95	107	23	245
Link Distance (ft)	867				662	662
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100	225	225		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Zone Summary

Zone wide Queuing Penalty: 10

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7205	7218	7252	7325	7444	7386	7286
Vehs Exited	7054	7051	7165	7280	7201	7224	7167
Starting Vehs	347	366	366	395	325	388	367
Ending Vehs	498	533	453	440	568	550	486
Travel Distance (mi)	6233	6304	6297	6340	6401	6407	6366
Travel Time (hr)	471.4	519.2	462.2	460.9	521.0	505.7	537.9
Total Delay (hr)	286.7	332.3	275.1	272.6	331.2	315.9	349.1
Total Stops	15081	15407	15452	15575	16418	16173	15841
Fuel Used (gal)	294.4	308.2	294.4	295.2	310.6	307.3	313.7

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7102	7480	7208	7288
Vehs Exited	6913	7352	7096	7148
Starting Vehs	383	339	343	353
Ending Vehs	572	467	455	497
Travel Distance (mi)	6133	6513	6285	6328
Travel Time (hr)	598.8	457.5	551.8	508.6
Total Delay (hr)	416.8	265.0	365.6	321.0
Total Stops	16064	16009	15433	15739
Fuel Used (gal)	321.1	299.1	314.8	305.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1699	1726	1758	1726	1756	1734	1785
Vehs Exited	1687	1719	1775	1749	1731	1709	1758
Starting Vehs	347	366	366	395	325	388	367
Ending Vehs	359	373	349	372	350	413	394
Travel Distance (mi)	1491	1532	1581	1526	1524	1529	1603
Travel Time (hr)	85.1	92.3	94.6	91.0	87.6	91.4	95.4
Total Delay (hr)	40.7	46.8	47.6	45.7	42.3	46.1	48.0
Total Stops	3253	3474	3488	3485	3393	3376	3633
Fuel Used (gal)	64.3	67.4	69.3	67.3	66.0	66.1	69.8

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1796	1746	1780	1751
Vehs Exited	1819	1739	1728	1739
Starting Vehs	383	339	343	353
Ending Vehs	360	346	395	361
Travel Distance (mi)	1604	1549	1565	1550
Travel Time (hr)	101.1	86.8	93.8	91.9
Total Delay (hr)	53.5	41.2	47.4	45.9
Total Stops	3841	3326	3507	3480
Fuel Used (gal)	72.0	66.0	68.7	67.7

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	2186	2135	2175	2260	2253	2262	2180
Vehs Exited	2066	1966	1989	2119	1988	2104	2067
Starting Vehs	359	373	349	372	350	413	394
Ending Vehs	479	542	535	513	615	571	507
Travel Distance (mi)	1701	1690	1697	1789	1722	1804	1725
Travel Time (hr)	117.7	120.8	118.0	128.0	132.1	133.5	125.6
Total Delay (hr)	66.9	70.4	67.3	74.4	80.8	79.8	74.3
Total Stops	4263	4180	4486	4817	4887	4932	4717
Fuel Used (gal)	78.1	78.9	77.8	82.7	82.0	84.7	81.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	2175	2216	2210	2204
Vehs Exited	1929	2030	1992	2028
Starting Vehs	360	346	395	361
Ending Vehs	606	532	613	545
Travel Distance (mi)	1691	1759	1703	1728
Travel Time (hr)	132.7	126.2	125.0	125.9
Total Delay (hr)	82.4	73.8	74.3	74.4
Total Stops	4612	4956	4346	4615
Fuel Used (gal)	81.3	81.5	80.2	80.8

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1700	1690	1698	1690	1724	1653	1709
Vehs Exited	1763	1705	1761	1739	1847	1742	1741
Starting Vehs	479	542	535	513	615	571	507
Ending Vehs	416	527	472	464	492	482	475
Travel Distance (mi)	1595	1573	1540	1529	1650	1519	1568
Travel Time (hr)	120.4	137.4	114.8	115.7	138.0	132.2	140.1
Total Delay (hr)	73.3	91.2	69.1	70.4	89.4	87.3	93.7
Total Stops	3961	3964	3826	3713	4270	3945	3795
Fuel Used (gal)	75.0	78.7	72.5	72.2	81.1	76.4	77.9

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1579	1840	1655	1687
Vehs Exited	1680	1921	1720	1758
Starting Vehs	606	532	613	545
Ending Vehs	505	451	548	475
Travel Distance (mi)	1483	1686	1570	1571
Travel Time (hr)	164.0	117.5	161.2	134.1
Total Delay (hr)	120.2	67.7	114.9	87.7
Total Stops	3951	4041	3906	3935
Fuel Used (gal)	81.9	77.7	84.0	77.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	10	2	3	4	5	6
Vehs Entered	1620	1667	1621	1649	1711	1737	1612
Vehs Exited	1538	1661	1640	1673	1635	1669	1601
Starting Vehs	416	527	472	464	492	482	475
Ending Vehs	498	533	453	440	568	550	486
Travel Distance (mi)	1446	1509	1479	1495	1505	1554	1470
Travel Time (hr)	148.3	168.7	134.8	126.2	163.2	148.6	176.8
Total Delay (hr)	105.9	123.9	91.1	82.1	118.7	102.7	133.2
Total Stops	3604	3789	3652	3560	3868	3920	3696
Fuel Used (gal)	77.1	83.1	75.0	73.1	81.6	80.2	84.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	7	8	9	Avg
Vehs Entered	1552	1678	1563	1643
Vehs Exited	1485	1662	1656	1620
Starting Vehs	505	451	548	475
Ending Vehs	572	467	455	497
Travel Distance (mi)	1355	1519	1448	1478
Travel Time (hr)	201.0	127.1	171.8	156.7
Total Delay (hr)	160.8	82.2	129.0	113.0
Total Stops	3660	3686	3674	3711
Fuel Used (gal)	85.9	73.9	82.0	79.6

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	4.2	0.2	3.8	0.2	0.0	0.0
Total Delay (hr)	2.9	5.5	0.1	0.2	5.1	0.2	0.2	0.1	0.0	1.5	0.1	1.6
Total Del/Veh (s)	27.2	15.2	9.3	34.6	15.0	5.1	34.9	43.8	12.7	27.9	16.7	15.5
Stop Delay (hr)	2.2	1.3	0.0	0.2	3.5	0.1	0.1	0.1	0.0	1.4	0.1	1.4
Stop Del/Veh (s)	20.4	3.7	1.4	32.2	10.2	4.0	33.0	40.2	12.9	25.4	14.8	13.4

5: Garrity Dr/Power Inn Rd & Sheldon Rd Performance by movement

Movement	All
Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.1
Total Delay (hr)	17.5
Total Del/Veh (s)	16.9
Stop Delay (hr)	10.4
Stop Del/Veh (s)	10.1

Total Zone Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	1.6
Total Delay (hr)	17.5
Total Del/Veh (s)	1102.7
Stop Delay (hr)	10.4
Stop Del/Veh (s)	656.8

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	B34	B34
Directions Served	L	L	T	T	R	L	T	T	T	R	T	T
Maximum Queue (ft)	182	195	386	330	33	76	255	236	231	100	27	29
Average Queue (ft)	82	99	115	122	6	16	133	121	119	35	1	0
95th Queue (ft)	151	165	286	270	22	54	223	211	205	80	18	12
Link Distance (ft)		1399	1399	1399			286	286	286		289	289
Upstream Blk Time (%)						0	0	0	0	0		0
Queuing Penalty (veh)						0	2	1	1	0		0
Storage Bay Dist (ft)	400				390	210				180		
Storage Blk Time (%)				0			1		2			
Queuing Penalty (veh)				0			0		2			

Intersection: 5: Garrity Dr/Power Inn Rd & Sheldon Rd

Movement	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	L	T	R
Maximum Queue (ft)	45	38	20	119	124	29	310
Average Queue (ft)	12	7	4	45	59	6	113
95th Queue (ft)	35	27	16	92	104	24	230
Link Distance (ft)		867				662	662
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	100		100	225	225		
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Zone Summary

Zone wide Queuing Penalty: 7