INITIAL STUDY

Millenium Estates Project

Prepared for:

City of Hanford - Community Development Department
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February 2026

TABLE OF CONTENTS

PROJECT INFORMATION **4**

Project title 4

Lead agency name and address 4

Contact person and phone number 4

Project location 4

Project sponsor's name/address 5

General plan designation 5

Zoning 5

Project Description 5

Existing Conditions and Surrounding Land Uses 6

Other Project Approvals 6

Tribal Consultation 6

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED **10**

DETERMINATION **11**

ENVIRONMENTAL CHECKLIST **12**

I. AESTHETICS 12

II. AGRICULTURE AND FOREST RESOURCES 16

III. AIR QUALITY 19

IV. BIOLOGICAL RESOURCES 29

V. CULTURAL RESOURCES 47

VI. ENERGY 51

VII. GEOLOGY AND SOILS 56

VIII. GREENHOUSE GAS EMISSIONS....61

IX. HAZARDS AND HAZARDOUS MATERIALS....70

X. HYDROLOGY AND WATER QUALITY....75

XI. LAND USE AND PLANNING....81

XII. MINERAL RESOURCES....83

XIII. NOISE....84

XIV. POPULATION AND HOUSING....89

XV. PUBLIC SERVICES....91

XVI. RECREATION....95

XVII. TRANSPORTATION/TRAFFIC....97

XVIII. TRIBAL CULTURAL RESOURCES....102

XX. WILDFIRE....110

XXI. MANDATORY FINDINGS OF SIGNIFICANCE....112

LIST OF PREPARERS....115

PROJECT INFORMATION

This document is the Initial Study for the potential environmental effects of the Millenium Estate Project (Project) proposed in the City of Hanford (City). To accommodate this Project, the City will need to approve a Planned Unit Development and Tentative Subdivision Map. The City of Hanford will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. Copies of all materials referenced in this report are available for review in the project file during regular business hours at the Hanford Community Development Department at 317 N. Douty Street, Hanford, CA 93230.

Project title

Millenium Estates Project

Lead agency name and address

City of Hanford - Community Development Department

317 N. Douty Street

Hanford, CA 93230

Contact person and phone number

Gabrielle Myers
City of Hanford
(559) 585-2578
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Project location

The City of Hanford lies in the Central San Joaquin Valley region, in the eastern portion of Kings County (see Figure 1). State Route (SR) 198 runs east-west through the southern portion of the City and SR 43 runs north-south around the eastern boundary. The proposed Project site is located within the City of Hanford limits, near the western City limit boundary. The proposed development is located on an approximately 30.9-acre site south of Lacey Blvd and west of 12 ½ Avenue on Assessor's Parcel Number 011-010-010.

Project sponsor's name/address

N & M Capital LLC
1878 N. Mooney Blvd., Suite J
Tulare, CA 93274
(559) 799-6993

General plan designation

Low Density Residential

Zoning

R-L-5 (Low Density Residential)

Project Description

The Project Applicant intends to develop up to 211 single-family residential units on an approximately 30.9-acre site. Access roads, lighting, landscaping and other associated improvements will be constructed, per City Standards (see Figures 3) within the proposed Project site and along the future 12 ½ Avenue alignment (to be named Aquifer Drive). Construction will include the connection to City water, storm drain and sewer within the development with connection to existing lines in 12 ½ Avenue (to be named Aquifer Drive) and Millenium Way, along with other utilities such as electric and communication lines.

Entitlements needed to accommodate the proposed Project include a Tentative Subdivision Map and a Planned Unit Development to accommodate a variety of lot sizes and modified setbacks.

The proposed Project is consistent with the General Plan density of between two to ten units per acre in the Low Density Residential category. The proposed Project density is 6.82 units per acre.

Site Circulation

Vehicular access to the Project will be from future Millenium Way, which bisects the property and 12 ½ Avenue (to be named Aquifer Drive) to the east. Future connections have been provided to the north and west of the property, as shown in Figure 3. Each single-family residence will include a two-car garage.

Construction Phasing

The Project is anticipated to be developed in three phases over three years total.

Existing Conditions and Surrounding Land Uses

The Project site currently supports an active orchard with associated agricultural roads and small strips of disturbed vegetation along the edges of the boundaries. Analysis of aerial imagery indicates that the site has been used for agricultural purposes since at least 1957.

The project vicinity is characterized by a mix of urban and agricultural uses. Areas immediately surrounding the project site consist of agricultural lands in all directions, a small residential area to the north, a second small residential area and in-progress construction to the east, and a sporadically inundated, remnant segment of Mussel Slough to the south, a portion of which was historically excavated as a borrow pit and is now used as an overflow basin by the city and surrounding agricultural growers.

Other Project Approvals

- Approval of a Tentative Subdivision Map by the City of Hanford
- Approval of a Planned Unit Development by the City of Hanford
- Approval of Building Permits by the City of Hanford
- Compliance with Rule 9510 by the San Joaquin Valley Air Pollution Control District
- Storm Water Pollution Prevention Plan by the Central Valley Regional Water Quality Control Board
- Compliance with other federal, state and local requirements

Tribal Consultation

The City of Hanford has not received any Project-specific requests from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the City of Hanford.

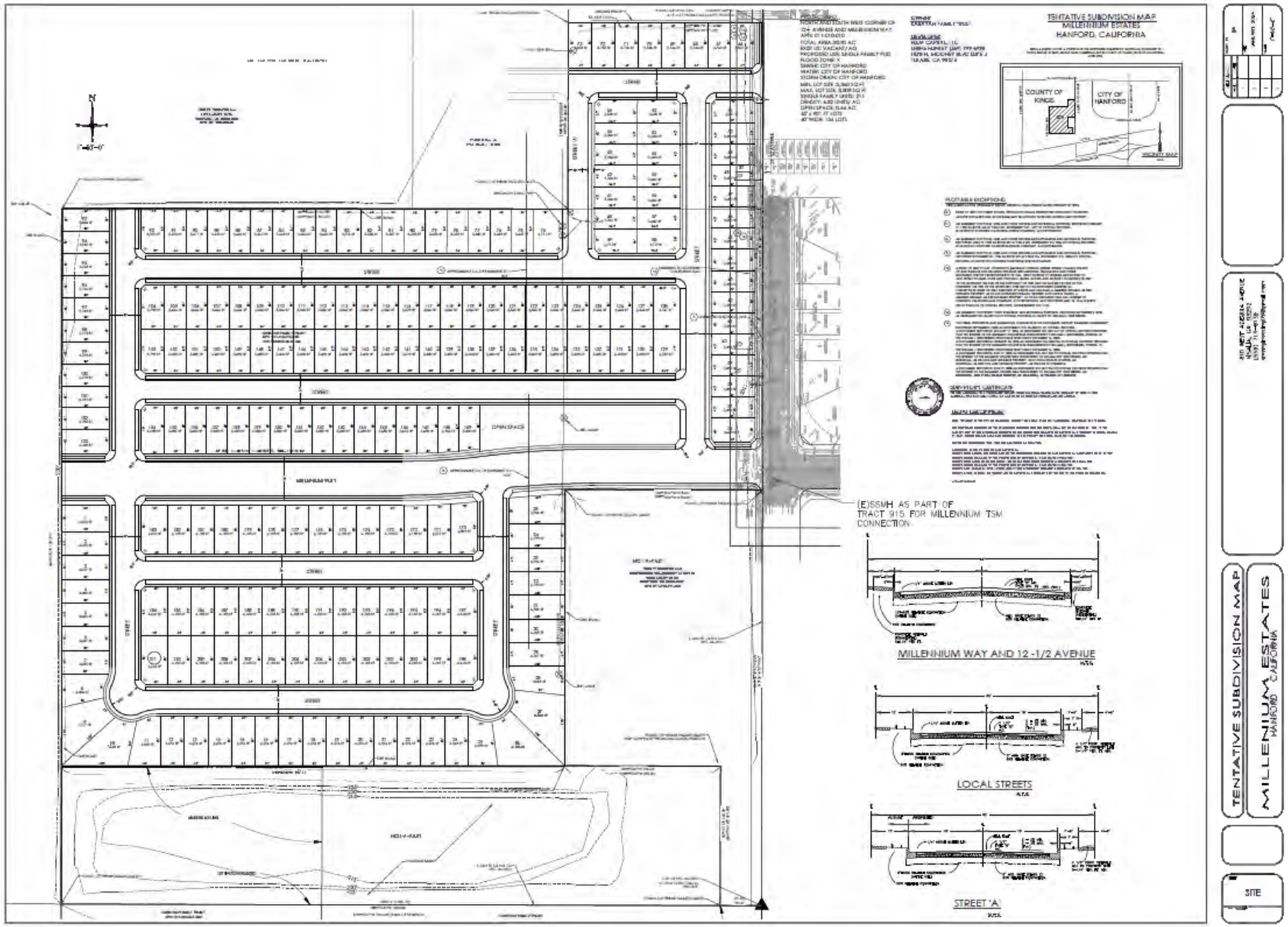
Figure 1 – Location



Figure 2 – Site Aerial



Figure 3 – Site Plan



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

DETERMINATION

On the basis of this initial evaluation:

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

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

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described 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 proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Gabrielle Myers — February 11, 2026

Gabrielle Myers
City of Hanford

Date

ENVIRONMENTAL CHECKLIST

I. AESTHETICS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The 30.9-acre Project site currently supports row crop agriculture. To the east of the Project is an existing apartment complex and a residential development under construction, west is agricultural land, north is agricultural land, south is an existing borrow pit which was formerly a part of the Mussel Slough and active agricultural land.

RESPONSES

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?

Less Than Significant Impact. The Project Applicant intends to develop 211 single-family residential units on an approximately 30.9-acre site.

A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The City of Hanford is located in the northern portion of Kings County and is composed of 16.6 square miles of flat land, not covered by water. The only natural waterway is Mussel Slough, remnants of which still exist on the City's western boundary. The People's Ditch, an irrigation canal dug in the 1870's, spans Hanford from north to south. The City does not identify any scenic vistas within the Project area; views consist primarily of broad panoramas of agricultural land.

The land has been designated for and Low-Density Residential. There are no officially designated or eligible State Scenic Highways near the Project area. There are also no rock outcroppings within the City's General Plan Study Area. The City does have an ordinance protecting trees in Chapter 12.12, Street Trees and Shrubs, of the Municipal Code. However, the Project would be consistent with the tree ordinance. The Project would not substantially damage scenic resources, including, but not limited to, rock outcroppings, trees and historical buildings within a State Scenic Highway. Impacts would be ***less than significant.***

Mitigation Measures: None are required.

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 regulations governing scenic quality?

Less than Significant Impact. The proposed Project would alter the existing visual character of public views of the site from agricultural row crops to fully developed single-family residences. Upon approval of the Planned Unit Development and Tentative Subdivision Map, the Project design is subject to the General Plan and zoning standards, which apply to site layout, building design, landscaping, interior street design, lighting, parking and signage.

The improvements such as those proposed by the Project are typical of City urban areas and are generally expected from residents of the City. The development will be required to comply with the General Plan, proposed zoning, R-L-5 Low-Density Residential, except where expressly modified through the planned

unit development, and the Tree Ordinance. The proposed improvements would not substantially degrade the visual character of the area and would not diminish the visual quality of the area, as they would be consistent with the existing urban visual setting. The proposed Project itself is not visually imposing against the scale of the existing nearby residential buildings and nature of the surrounding area.

Therefore, the Project would have ***less than significant impacts*** on the visual character of the area.

Mitigation Measures:

None Required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass". Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Spillover light is light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited. Spillover light can adversely affect light-sensitive uses, such as residential neighborhoods at nighttime. Because light dissipates as it travels from the source, the intensity of a light fixture is often increased at the source to compensate for the dissipated light. This can further increase the amount of light that illuminates adjacent uses. Spillover light can be minimized by using only the level of light necessary, and by using cutoff type fixtures or shielded light fixtures, or a combination of fixture types.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would

travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Current sources of light in the Project area are from adjacent roadways and nearby residential and agricultural uses. The Project would necessitate street lighting and such lighting that would be subject to City standards, as outlined in the Hanford Municipal Code, Section 17.50.140 – Outdoor Lighting Standards which would reduce regulate light and glare generated from the Project. Accordingly, potential impacts would be considered ***less than significant.***

Mitigation Measures:

None required.

II. AGRICULTURE AND FOREST RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is located in western Hanford, inside the City limits in Kings County within the San Joaquin Valley, California.

RESPONSES

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?

Less Than Significant Impact. The proposed site is designated as *Prime Farmland* by the State Farmland Mapping and Monitoring Program (FMMP).[1] No land under Williamson Act contracts occur in the proposed Project area.

The proposed Project site is currently planned for urban development in the General Plan. The General Plan EIR evaluated the full build-out of the Planning Area and determined that over the 2014-2035 planning period, approximately 2,706 acres of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland would be converted to nonagricultural uses with General Plan buildout. In accordance with the General Plan EIR, the Project would be required to adhere to the Hanford Municipal Code 16.40.110 (Right to Farm) and the proposed goals and agriculture-related policies of the General Plan. However, the loss of farmland as a result of the General Plan Update was determined to be significant and unavoidable. A statement of overriding considerations was adopted for the significant and unavoidable impacts resulting from agriculture conversion. As such, no new impacts resulting from the conversion of agricultural land will occur with Project implementation. Impacts are ***less than significant***.

Mitigation Measures: None Required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

[1] California Important Farmland Finder, Department of Conservation. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed November 2025.

No Impact. The Project is currently zoned R-L-5 (Low-Density Residential). The Project parcels are not under Williamson Act Contracts, thus, there is ***no impact***.

Mitigation Measures: None are required.

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?

No Impact. The proposed Project site is currently an active agricultural row crop. The land immediately surrounding the site are residential and agricultural. No forestland is on-site or in the vicinity. The Project would not conflict with existing zoning for, or cause rezoning of, Forest Land, Timberland or Timberland Zoned Timberland Production, as these designations do not exist within the City. The Project would not result in the loss of forest land or conversion of forest land to non-forest use, as these designations also do not exist within the City. There is ***no impact.***

Mitigation Measures: None are required.

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?

Less Than Significant Impact. Project development is site specific and will not involve other changes to the existing environment. The site is designated for residential development and agricultural conversion impacts in the City's projected development areas were assessed in the Hanford General Plan EIR, planning period 2014 -2035. Impacts were considered significant and unavoidable and a Statement of Overriding Considerations was adopted. There would be ***a less than significant.***

Mitigation Measures: None are required.

III. AIR QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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 or adversely affecting a substantial number of people)?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The climate of the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy, winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "non-

attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O_3, a State and Federal non-attainment area for $PM_{2.5}$, a State non-attainment area for PM_{10}, and Federal and State attainment area for CO, SO_2, NO_2, and Pb.[2]

REGULATORY SETTING

Federal

Clean Air Act

The federal Clean Air Act of 1970 (as amended in 1990) required the U.S. Environmental Protection Agency (EPA) to develop standards for pollutants considered harmful to public health or the environment. Two types of National Ambient Air Quality Standards (NAAQS) were established. Primary standards protect public health, while secondary standards protect public welfare, by including protection against decreased visibility, and damage to animals, crops, landscaping and vegetation, or buildings. NAAQS have been established for six "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb).

State

California Air Resources Board

The California Air Resources Board (CARB) is the state agency responsible for implementing the federal and state Clean Air Acts. CARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H_2S), and vinyl chloride.

The proposed Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the SJVAPCD.

Air basins are classified as attainment, nonattainment, or unclassified. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an

[2] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed November 2025.

unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Table 1
Standards and Attainment Status for Listed Pollutants in the Air District[3]

	Federal Standard	California Standard
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.30 ppm (annual avg) 0.18 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1hr avg)
Lead	1.5 µg/m3 (calendar quarter) 0.15 µg/m3 (rolling 3-month avg)	1.5 µg/m3 (30-day avg)
Particulate Matter (PM10)	150 µg/m3 (24-hr avg)	20 µg/m3 (annual avg) 50 µg/m3 (24-hr avg)
Particulate Matter (PM2.5)	15 µg/m3 (annual avg)	35 µg/m3 (24-hr avg) 12 µg/m3 (annual avg)

µg/m3 = micrograms per cubic meter

Additional State regulations include:

CARB Portable Equipment Registration Program – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

[3] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed November 2025.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

In addition, the proposed Project is being evaluated pursuant to CEQA.

Local

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. The SJVAPCD has several rules and regulations that may apply to the Project:

Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the SJVAPCD's cost for reviewing these plans and conducting compliance inspections.

Rules 4101 (Visible Emissions) and 4102 (Nuisance) – These rules apply to any source of air contaminants and prohibits the visible emissions of air contaminants or any activity which creates a public nuisance.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations) – This rule applies to use of asphalt for paving new roadways or restoring existing roadways disturbed by project activities.

Regulation VIII (Fugitive PM_{10} Prohibitions) – This regulation, a series of eight regulations, is designed to reduce PM_{10} emissions by reducing fugitive dust. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced. The control measures are summarized in Table 2.

Table 2
San Joaquin Valley Air Pollution Control District
Regulation VIII Control Measures for Construction Related Emissions of PM_{10}[4]

The following are required to be implemented at all construction sites:
All disturbed areas, including storage piles, which are not actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressants, covered with a tarp or other similar cover, or vegetative
All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions during construction using water or chemical stabilizer
All land clearing, grubbing, scraping, excavation, land leveling, grading cut and fill, and demolition activities during construction shall be effectively controlled of fugitive dust emissions utilizing application of water or pre-soaking.
When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from top of container shall be maintained.
All operations shall limit, or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of
Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site at the end of each workday.
Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

RESPONSES

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. An Air Quality and Greenhouse Gas Impact Memo (Memo) was prepared by Padre and Associates, October 2025, attached as Appendix A. The emissions were estimated using the most recent emission factors and load factors obtained from the California Emissions Estimator Model® (CalEEMod) User's Guide, Emission Factors (EMFAC) model.

If a Project were to generate criteria pollutants below significance thresholds adopted by the SJVAPCD the Project would be considered to result in a less than significant impact and in compliance with adopted SJVAPCD rules and regulations.

[4] San Joaquin Valley Air Pollution Control District. Current District Rules and Regulations. http://www.valleyair.org/rules/1ruleslist.htm#reg8. Accessed December 2025.

Estimates for both construction and operational emissions; based on the development of 211 housing units were evaluated in the Air Quality and Greenhouse Gas Memo as shown in Table 3-4 and 3-5 below.

Table 3

Estimated Construction Criteria Pollutant Emissions

Phase	NOx	ROG	PM10	PM2.5	CO	SO2
Year 1	0.513	0.054	0.893	0.156	2.100	0.006
Year 2	0.605	0.039	0.624	0.128	1.033	0.006
Year 3	0.098	0.010	0.062	0.017	0.393	0.001
SJVAPCD Significance Threshold (tpy)	**10**	**10**	**15**	**15**	**100**	**27**
Exceeds Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Units shown in Tons per Year (tpy)

Table 4

Estimated Operational Criteria Pollutant Emissions

Phase	NOx	ROG	PM10	PM2.5	CO	SO2
Operations Phase without Resident Vehicle Emissions	0.044	0.102	0.003	0.001	5.14	0.0003
Operations Phase Resident Vehicle Emission	0.284	0.051	3.66	0.928	4.80	0.022
Total Operational Emissions	**0.33**	**0.153**	**3.66**	**0.929**	**9.94**	**0.023**
SJVAPCD Significance Threshold	**10**	**10**	**15**	**15**	**100**	**27**
Exceeds Thresholds?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Padre and Associates Memorandum, Appendix A

Units shown in Tons per Year (tpy)

As shown above, the Project's short-term (construction) and long-term (operational) emissions are below SJVAPCD thresholds. As a result, the Project will not conflict with or obstruct implementation of any air quality plans. The impact of the Project would be ***less than significant.***

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?

Less Than Significant Impact. Based on the Project construction schedule of approximately three years, criteria pollutant emissions for the Project were estimated to be well below the SJVAPCD significance thresholds (refer to Table 3 above). Operational Emissions were also estimated to be well below the SJVAPCD thresholds as shown in Table 4.

The primary sources of particulate matter of 10 microns in diameter or less (PM10) and particulate matter 10 microns or less (PM2.5) emissions were fugitive dust from temporary grading activities and vehicles traveling on paved roads. Diesel particulate matter (DPM) from the use of onsite diesel-powered equipment was estimated to be less than 0.0061 tons per year. Full emissions estimate tables are provided as an attachment in Appendix A.

The San Joaquin basin is in non-attainment for ozone and PM2.5 for federal standards and non attainment for ozone, PM10 and PM 2.5 for State standards. SJVAPCD nonattainment status is attributed to the regions development history. Past, present, and future development projects contribute to the regions adverse air quality impacts on a cumulative basis. By it's very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emission contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Since the basin is in non-attainment for ozone, PM10 and PM2.5, it is considered to have an existing significant cumulative health impact without the Project. When this occurs, the analysis considered whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable. The

SJVAPCD regional thresholds for Nox, VOC, PM10 and PM2.5 are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would be considered to have a cumulative health impact. As shown in Tables 3 and 4, the Projects construction and operational emissions would not exceed SJVAPCD thresholds, impacts are considered to be ***less than significant.***

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Using the Project construction and operational emissions estimates, Padre completed a health risk prioritization screening of the Project's construction and operational phase DPM emissions using the SJVAPCD's Prioritization Calculator. The Prioritization Calculator utilizes toxic profiles based on Assembly Bill (AB) 2588 Hotspots Air Toxic Profiles and estimated Project emissions to calculate a prioritization score between 0 and 100 for cancer risk, acute toxicity risk, and chronic toxicity risk. In accordance with the Air Toxics Hot Spots Program, Facility Prioritization Guidelines (CAPCOA, 1990 and 2016) and APR-1906 Framework for Performing Health Risk Assessments (SJVAPCD, 2015) a facility or project with a prioritization score between 0 and less than 10 would not be required to perform a Health Risk Assessments (HRA) and would have a less than significant impact.

The nearest sensitive receptors to the Project consist of two single-family residential homes on adjacent properties within 0 to 100 meters to the north and east of the Project, Receptors 1 and 2. The prioritization screening evaluated the impacts to receptors for the estimated onsite Project DPM emission associated with construction and operation phases, Table 5 below summarizes the results of the prioritization scores related to total DPM emissions generated for all three years of construction and operations. However, because DPM emissions from construction activities are dispersed throughout the site rather than originating from a single point, it is more representative to use the emissions generated within 0 to 100 meters of the nearest sensitive receptors. Therefore the study shows estimated DPM emissions generated with the portion of the Project that falls within the 0-to 100 meters of the two nearest receptors, Tables 6 and 7 below.

Table 5

Prioritization Screening – Total Onsite DPM Emissions

Receptor Proximity (Meters)	Construction Year 1	Construction Year 2	Construction Year 3	Operational Only
0-100	28.18	10.16	4.62	2.31

Table 6

Estimated Onsite DPM Emissions within a Defined Radius of Sensitive Receptor 1

Sensitive Receptor 1	Radius from Sensitive Receptor (Meters)		
	0 to 100	0 to 250	0 to 500
Year 1	0.0004	0.0018	0.0057
Year 2	0.0002	0.0007	0.0021
Year 3	0.0001	0.0002	0.0007

Table 7

Estimated Onsite DPM Emissions within a Defined Radius of Sensitive Receptor 2

Sensitive Receptor 2	Radius from Sensitive Receptor (Meters)		
	0 to 100	0 to 250	0 to 500
Year 1	0.0008	0.0043	0.0061
Year 2	0.0003	0.0016	0.0022
Year 3	0.0001	0.0005	0.0008

Using these estimated emissions, the maximum prioritization scores for the construction phase is 1.85 for Receptor 1 and 3.70 for Receptor 2, Tables 8 and 9 below.

Table 8

Prioritization Screening – Onsite DPM Emissions Generated within 0-100 Metters of Residential Receptor 1

Receptor Proximity	Construction Year 1
0-100	1.85

Table 9

Prioritization Screening – Onsite DPM Emissions Generated within 0-100 Metters of Residential Receptor 2

Receptor Proximity	Construction Year 1
0-100	3.70

None of the prioritization scores indicated for DPM emissions generated within 0-100 meters of Residential Receptor 1 and 2 exceed 10, therefore an HRA would not be required by the SJVAPCD, impacts are considered ***less than significant.***

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Less Than Significant Impact. The Project will create temporary localized odors during Project construction, such as odors from diesel-powered equipment and vehicles. These odors will be temporary and would most likely not occur over an extended period of time or concentrated in one location on the Project.

The proposed Project uses are not anticipated to create or emit objectionable odors that would affect a substantial number of people; therefore impacts are considered to be ***less than significant.***

IV. BIOLOGICAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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 Game 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, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

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 Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include dairy, cattle, groves, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

A Biological Evaluation (BE) was performed on behalf of the Project by Live Oak Associates in May 2025 and is the basis of the impact analysis. The BE report can be found in its entirety in Appendix B.

A search of the California Natural Diversity Database (CNDDB), the Inventory of Rare and Endangered Vascular Plants of California, manuals, reports and references related to plants and animals of the San Joaquin Valley, and other available planning documents and biological studies from the general Project vicinity were utilized. Additionally, a field reconnaissance survey of the Project site was conducted as part of the BE.

<u>Database Searches</u>

The California Natural Diversity Data Base (CNDDB) was queried for special status plant and animal occurrences in the nine USGS 7.5-minute quadrangles containing and surrounding the Project (Riverdale, Laton, Burris Park, Lemoore, Hanford, Remnoy, Stratford, Guernsey, and Waukena). A number of special status plants and animals were returned in the query and are summarized below in Table 10. Sources of information for this table included California's Wildlife, Volumes I, II, and III (Zeiner et. al 1988-1990), California Natural Diversity Data Base (CDFW 2025), The Jepson Manual: Vascular Plants of California, second edition (Baldwin et al 2012), the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025), Calflora.org, and eBird.org.

Table 10

List of Special Status Species Potentially Occurring in the Project Vicinity

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Earlimart Orache (*Atriplex cordulata var. erecticaulis*)	CRPR 1B.2	Occurs in valley and foothill grasslands between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Brittlescale (*Atriplex depressa*)	CRPR 1B.2	Occurs in chenopod scrub, valley and foothill grassland, meadows and seeps, playas, and vernal pools. It is rarely found in riparian or marsh habitats. Blooms April-October; elevations below 1,050 ft.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Lesser Saltscale (*Atriplex minuscula*)	CRPR 1B.1	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils blooms May-October; elevation 50-660 ft.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Subtle Orache (*Atriplex subtilis*)	CRPR 1B.2	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	**Absent.** Vernal pool habitat is absent from the Project.
Recurved Larkspur (*Delphinium recurvatum*)	CRPR 1B.2	Occurs in alkaline soils of cismontane woodland and valley and foothill grasslands in elevations 100 – 2,000 feet. Blooms March-June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CRPR 1B.1	Occurs in valley grassland, alkali sink, wetland riparian areas less than 328 ft. in elevation in the southern Sacramento Valley and San Joaquin Valley. Blooms February – June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Panoche Pepper-grass (*Lepidium jaredii ssp. album*)	CRPR 1B.2	Occurs in valley grassland, dry streambeds, and alluvial fans below 1,000 ft. in elevation. Ranges from San Benito County to San Luis Obispo County. Blooms February – June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Mud Nama (*Nama stenocarpa*)	CRPR 2B.2	Occurs in intermittently wet areas such as lake shores and riverbanks. Occurs sparingly in the Central Valley and more frequently in Southern California from sea level to below 1,640 feet. Blooms January-July.	**Absent.** Intermittently wet areas needed for the proliferation of this species are absent from the Project.
California Alkali Grass (*Puccinellia simplex*)	CRPR 1B.2	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley, San	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
		Francisco Bay area and western Mojave Desert; elevations below 3,000 feet. Blooms March-May.	on site or in the immediate vicinity.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CRPR 1B.2	Occurs in freshwater emergent marsh habitat in drainage ditches and canals of California's Central Valley. Blooms May to October.	**Absent.** Aquatic habitat needed to support this species is absent from the Project.

ANIMALS

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Valley Elderberry Longhorn Beetle (VELB) *(Desmocerus californicus dimorphus)*	FT	Occurs in vernal pools, clear to tea- colored water in grass or mud- bottomed swales, and basalt depression pools.	**Absent**. VELB distribution is no longer thought to include the San Joaquin Valley south of Merced County. Furthermore, blue elderberry shrubs required by this species are absent from the site.
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*	FT	Occurs in vernal pools, clear to tea- colored water in grass or mud- bottomed swales, and basalt depression pools.	**Absent.** Suitable habitat in the form of vernal pools is absent from the site and immediately surrounding lands.
Vernal Pool Tadpole Shrimp *(Lepidurus packardi*)	FE	Vernal pools of clear to turbid waters of the Central Valley measuring 54 sq.ft. to larger pools (largest known to be 89-acre Olcott Lake).	**Absent**. Suitable habitat in the form of vernal pools is absent from the site and immediately surrounding lands.

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
California Tiger Salamander- Central California DPS *(Ambystoma californiense)*	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** The Project is situated in a matrix of urban and intensive agricultural lands within which this species would not have been able to persist. The aquatic features within the vicinity of the Project are unsuitable for this species' ecology. and there are no CNDDB occurrences within 10-miles of the Project (CDFW 2025).
Western Spadefoot *(Spea hammondii)*	FPT, CSC	Occurs in grasslands of San Joaquin Valley, where it breeds in vernal pools or other seasonal wetlands and aestivates in underground refugia such as rodent burrows. Baumberger et al. (2019) recorded a maximum distance of around 860 feet between breeding and aestivation sites.	**Absent.** The Project is situated in a matrix of urban and intensive agricultural lands within which this species would not have been able to persist.. The closest CNDDB occurrence is over 10 miles northeast of the Project (CDFW 2025).
Northwestern Pond Turtle (*Actinemys marmorata)*	FPT, CSC	Found in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires partially submerged rocks or logs for basking sites. Nesting takes place in open areas, on a variety of soil types, and up to ¼ mile away from water. Overwintering and summertime aestivation includes use of upland habitat, generally with leaf	**Unlikely**. The Project consists entirely of intensive agricultural lands that lack aquatic features and offer little to no upland habitat for this species; the latter is limited to marginal nesting habitat in the site's small strips of uncultivated border lands. Historical aerials of the remnant portions of Mussel Slough in the near project vicinity indicate that the slough is typically only inundated during periods of heavy precipitation, which

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
		litter or other loose substrate for burying themselves.	would not be adequate to support this species. The surrounding upland habitat consists entirely of agricultural lands, which offer little to no suitable habitat for this species. Western pond turtles are known from the general area, having been documented in large numbers at the Hanford Wastewater Treatment Facility, approximately 2.5 miles southeast of the site (Germano 2010). Past that, the closest iNaturalist and CNDDB records of this species are approximately 7 miles northwest of the site in the Kings River and 7 miles southwest of the site in Mussel Slough, respectively. (iNaturalist 2025, CDFW 2025). Despite having some presence in the Hanford area, northwestern pond turtles are unlikely to be found on the Project for the reasons discussed here.
Blunt-Nosed Leopard Lizard *(Gambelia sila)*	FE, CE, FP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	**Absent.** Agricultural and urban development has eliminated any potential habitat from the Project and surrounding area. There are no CNDDB occurrences within the vicinity of the Project (CDFW 2025).

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Swainson's Hawk *(Buteo swainsoni)*	CT	This breeding migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Possible.** The Project contains foraging habitat in the form of an alfalfa field and a large eucalyptus tree that could feasibly support nesting by Swainson's hawks. Other trees within ¼ mile of the Project could also be used for nesting. This species is well- documented in the area; there are 14 CNDDB nesting occurrences within 10 miles of the site and over 70 eBird sightings within a 10-mile radius as well (CDFW 2025, eBird 2025).
Western Snowy Plover (Charadrius nivosus nivosus)	FT, CSC	A small shorebird that breeds on the Pacific and Gulf Coasts of the U.S. and Mexico and locally inland at various locations including the San Joaquin Valley. While much of the interior population overwinters on the coast, some San Joaquin Valley breeders remain year-round. Typical nesting habitat in the San Joaquin Valley includes barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, and braided river channels. Foraging habitat includes dry flats and areas near shallow water.	**Unlikely**. The western snowy plover is known from the general area, with eBird sightings at the Hanford Wastewater Treatment Facility, approximately 2.5 miles southeast of the site, and several other eBird records at ponds 5-6 miles southeast of site boundaries. The nearest CNDDB occurrence is approximately 9 miles southwest of the site at an evaporation pond system near Stratford. The site itself lacks suitable nesting and foraging habitat for the western snowy plover, and this species is not expected to occur here.

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Burrowing Owl *(Athene cunicularia)*	CC, CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows. May occupy agricultural landscapes, utilizing burrows at field margins or on ditch banks or irrigation berms, and foraging in cropland.	**Unlikely.** The Project is situated in the outskirts of Hanford, in a matrix of anthropogenic uses generally not conducive to burrowing owl occupancy. LOA is not aware of any recent sightings of this species in the vicinity. Several eBird records are located between 5 and 7 miles from project boundaries, but all are from 2011 or prior. The closest CNDDB occurrence is a 2006 record mapped 9.5 miles northwest of the site. While the site's alfalfa field is theoretically suitable for foraging by this species, and the field margins theoretically suitable for roosting/nesting, landscape factors suggest a low probability of occurrence.
Tricolored Blackbird *(Agelaius tricolor)*	CT, CSC	Breeds colonially near fresh water in dense bulrush, cattails, thickets of willows or shrubs, and increasingly in wheat or triticale fields. Forages in grassland and cropland areas.	**Possible.** Tricolored blackbirds are not commonly documented in the project vicinity. The closest eBird records are 6.5-7 miles from project boundaries, and the closest CNDDB occurrence is over 10 miles away. Nevertheless, individuals of this species may pass through the area from time to time, in which case the site's alfalfa field may be used for foraging. The site does not provide nesting habitat for this species.

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
Tipton Kangaroo Rat *(Dipodomys nitratoides nitratoides*)	FE, CE	Inhabits valley saltbrush scrub, valley sink scrub, and grassland habitats located from the Valley floor to 300 ft. in elevation.	**Absent.** Suitable habitat is absent from the Project, and the site is situated in a matrix of intensive agricultural and urban uses within which this species would not have been able to persist. There are no CNDDB occurrences in the vicinity (CDFW 2025).
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged ground squirrel burrows as denning habitat. May become adapted to urban environments, as has occurred in the cities of Bakersfield, Taft, and Coalinga. Cities with kit foxes are typically adjacent to natural habitat. Kit foxes have not be observed in cities that are completely surrounded by agricultural land (Cypher et al. 2012).	**Unlikely.** This species was historically known from the project vicinity. There are 17 CNDDB occurrences within 10 miles of the Project, including one 2006 occurrence 1.5 miles northeast from project boundaries. The 2006 occurrence is the most recent with the remaining occurrences dating from 2002 back. Urbanization since that time has reduced the suitability of the greater Hanford area, and the project vicinity, for this species. Based on aerial imagery, the nearest remaining blocks of open natural land are over 8 miles west of the site near the Kings River. While the site itself may theoretically provide some foraging and denning opportunities for this species, landscape factors suggest a very low probability of occurrence.

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT
STATE SPECIES OF SPECIAL CONCERN			
California Glossy Snake (*Arizona elegans occidentalis*)	CSC	A medium sized snake most common in desert regions with arid scrub, rocky washes, grasslands, and chaparral habitat. Primarily nocturnal. Hunts small vertebrates.	**Absent.** Suitable habitat is absent from the Project, and the site is situated in a matrix of intensive agricultural and urban uses within which this species would not have been able to persist. There are no CNDDB occurrences within 10 miles of the site (CDFW 2025).
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	CSC	Occurs primarily as a migrant and summer resident from April to early October; breeds mid-April to late July. Small numbers winter in southern Central Valley and the Imperial and Colorado River valleys. Requires deepwater marshes and wetlands with tall emergent vegetation such as tules or cattails for breeding.	**Possible.** This species is occasionally sighted in the project vicinity. There is a 2024 eBird record in Hanford's Hidden Valley Park, approximately 2.5 miles northeast of the site. Several other eBird records are located 4-5 miles southwest to southeast of the site. There is some potential for yellow-headed blackbirds to occasionally forage in the site's alfalfa field. Nesting habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Roosts in rocky outcrops, cliffs, and crevices with access to open habitats for foraging. May also roost in caves, mines, hollow trees and buildings.	**Possible.** The site provides suitable foraging habitat and potential roosting habitat in trees on the north end of the Project.
OCCURRENCE DESIGNATIONS AND STATUS CODES **Present:** Species observed on the site at time of field surveys or during recent past. **Likely:** Species not observed on the site, but it may reasonably be expected to occur there on a regular basis. **Possible:** Species not observed on the site, but it could occur there from time to time.			

SPECIES	STATUS	HABITAT	OCCURRENCE WITHIN THE PROJECT

Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient

Absent: Species not observed on the Site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPT	Federally Proposed Threatened	SCS	California Species of Special Concern
FC	Federal Candidate	CFP	California Fully Protected
		CC	California Candidate for Listing

CRPR CODES

1A	Plants Presumed Extinct in California	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

Reconnaissance Survey

The Project site and a 50-foot buffer surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state- or federally protected resources. The site supported a variety of weedy grasses and forbs typical of a disturbed agricultural environment. The Project did not contain wildlife movement corridors, sensitive natural communities, designated critical habitat, or state or federally protected waters or wetlands.

RESPONSES

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 Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact with Mitigation. As provided in Table 10, Ten (10) special status plant species have been documented in the Project vicinity. All ten species are considered absent from the Project due to an absence of suitable habitat and/or soils, the site's being situated outside of the species' distribution, or a combination thereof. Therefore, impacts to special status plants are considered less than significant under CEQA.

Of the sixteen (16) special status animal species that potentially occur in the general vicinity of the site, twelve are considered absent from or unlikely to occur within the Project due to the absence of suitable habitat and/or the Project being situated outside of the species' known distribution (see Table 10). These comprise the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondii*), northwestern pond turtle (*Actinemys marmorata*), blunt-nosed leopard lizard (*Gambelia sila*), California glossy snake (*Arizona elegans occidentalis*), burrowing owl (*Athene cunicularia*), western snowy plover (*Anarhynchus nivosus nivosus*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), and San Joaquin kit fox (*Vulpes macrotis mutica*). The Project is expected to have a less than significant to no impact on these species through construction mortality/disturbance or loss of habitat because there is little or no likelihood that they are present.

Swainson's hawk

The Swainson's hawk, a state-listed species, is known to nest in the Project vicinity. A suitable nesting tree is present on the north edge of the Project and many more exist within ¼ mile of the Project. Alfalfa fields, a preferred foraging habitat for Swainson's hawk, comprise the majority of the Project site. The presence of a preferred foraging habitat increases the likelihood that trees within the vicinity of the Project could be utilized by Swainson's hawks for nesting.

If Swainson's hawks are nesting on or near the Project at the time of construction, individual hawks could be injured, killed, or disturbed such that they would abandon their nest. Project activities that adversely affect the nesting success or result in mortality of Swainson's hawks would violate state and federal laws and would be considered a significant impact under CEQA.

The Project provides high quality foraging habitat in the form of approximately 30 acres of alfalfa field, all slated for permanent development. While the loss of this area may cause any Swainson's hawks that currently forage on site to shift their foraging patterns to other agricultural fields, at present there appears to be sufficient alternative habitat in the immediate vicinity, and many square miles of alternative habitat in rural areas surrounding Hanford. Swainson's hawks have large foraging ranges; Estep (1989) calculated an average size of 6,820 acres for his study population in Central Valley. Given the wide-ranging foraging habits of this species and the relative abundance of similar agricultural fields in the general vicinity, loss of foraging habitat for the Swainson's hawk is not considered a significant impact of the Project under CEQA.

Implementation of Mitigation Measures BIO-1 through BIO-4 would reduce potential impacts to nesting Swainson's hawk to ***less than significant.***

Roosting Bats

The proposed Project's mature trees have the potential to be used for roosting by various bat species, possibly including the pallid bat (*Antrozous pallidus*), a California Species of Special Concern. It is assumed that the trees will be removed to accommodate residential construction. Any bats roosting in the trees at the time of removal are likely to be injured or killed. Construction-related injury or mortality of the pallid bat, or mortality of a significant number of bats associated with a roost sight or maternal roost is considered a potentially significant impact of the Project. The Project will not result in a significant loss of foraging habitat for the pallid bat. Although potential roost sites will be removed, other mature trees will remain available elsewhere in the Project vicinity. The site does not offer unique foraging habitat for bats, nor is it likely to represent an important part of any individual foraging range, given its disturbed nature and urban setting. Similar and higher quality foraging habitats are abundant in the Project vicinity and elsewhere in the region.

Implementation of Mitigation Measure BIO-8 through BIO-11 would reduce potential impacts to roosting bats to ***less than significant.***

Migratory Birds

The proposed Project is likely to support nesting by various birds and raptors protected by the Migratory Bird Treaty Act and related state laws. For example, the alfalfa field could be used by ground- or vegetation-nesting birds such as the mourning dove and western meadowlark, and the trees could be used by American robins, American crows, and northern mockingbirds, among other species. If Project construction takes place during the nesting season, birds nesting on site could be injured or killed by construction activities, while birds nesting near the site could be disturbed such that they would abandon their nests. Construction-related mortality of nesting birds and disturbance leading to nest abandonment would violate state and federal laws and constitute a significant impact of the project. Implementation of Mitigation Measures BIO-5 through BIO-7 would reduce potential impacts to ***less than significant.***

Conclusion

Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species or substantially modifies its habitat could constitute a significant impact. Mitigation Measures BIO-1 through BIO-11 are required to reduce the potential impacts to ***less than significant*** levels.

Mitigation Measures:

BIO-1

To the extent practicable, construction shall be scheduled to avoid the Swainson's hawk nesting season, which extends from March 1 through September 15.

BIO-2

If the Project must be constructed between March 1 and September 15, a qualified biologist shall conduct six pre-construction surveys within ¼ of the Project across a minimum of two survey periods as outlined in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SHTAC 2000).

BIO-3

Should any active nests be discovered in or near proposed construction zones, the biologist shall identify a suitable construction-free buffer around the nest. This buffer shall be identified on the ground with flagging or fencing and shall be maintained until the biologist has determined that the young have fledged.

BIO-4

Should construction activity be necessary within the designated buffer around an active Swainson's hawk nest, a qualified biologist shall monitor the nest daily for one week, and thereafter once a week, for the duration of the activity or until the nest is no longer active, whichever comes first. Should construction activity within the buffer change such that a higher level of disturbance will be generated, monitoring shall occur daily for one week and then resume the once-a-week regime. If, at any time, the biologist determines that construction activity may be compromising nesting success, construction activity within the designated buffer shall be altered or suspended until the biologist determines that there is no more potential to compromise success of the nest.

BIO-5

If feasible, future construction activities will take place entirely outside of the avian nesting season, defined as February 1 to August 31.

BIO-6

If construction must occur between February 1 and August 31, a qualified biologist shall conduct surveys for active bird nests within 7 days prior to the start of work during this period. The survey area shall encompass the site and surrounding lands within 500 feet for nesting raptors and 250 feet for other nesting birds.

BIO-7

Should any active nests be discovered in or near proposed construction zones, the biologist shall identify a suitable construction-free buffer around the nest. This buffer shall be identified on the ground with flagging or fencing and shall be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.

BIO-8

If feasible, demolition and removal of the mature trees will occur outside of the period between April 15 and September 30. This is the time frame within which colony-nesting bats in the vicinity generally assemble, give birth, nurse their young, and ultimately disperse.

BIO-9

Within 10 days prior to the removal of the site's trees, a qualified biologist shall survey them for roosting bats. The biologist shall look for individuals, guano, and staining, and shall listen for bat vocalizations. If necessary, the biologist shall wait for nighttime emergence of bats from roost sites.

BIO-10

Should any active maternity roosts be discovered, the biologist shall identify a suitable construction-free buffer around the maternity roost. The buffer shall be identified on the ground with flagging or fencing and shall be maintained until the biologist has determined that the nursery is no longer active.

BIO-11

If a non-breeding bat colony is found in tree cavities, the individuals shall be humanely evicted, under the direction of a qualified biologist, to ensure that bats are not physically harmed by removal of the trees.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact. As stated in the BE (see Appendix B), the proposed Project site does not contain any aquatic, water or hydrologic features. No impacts are anticipated to the adjoining portion of the Mussel Slough. There is no sensitive natural community on-site as the site is currently and has historically been utilized for agricultural production.

In conclusion, the proposed Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or United States Fish and Wildlife Service (USFWS) as no riparian habitat or other sensitive natural community is present in the Project area. The proposed Project will not 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 as no impacts to wetlands will occur. As such, there will be ***less than significant impacts.***

Mitigation Measures: None are required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. As stated in the BE, the Project did not contain wildlife movement corridors, sensitive natural communities, designated critical habitat, or state or federally protected waters or wetlands. Therefore, the Project will have *no impact*.

Mitigation Measures: None are Required.

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 Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. According to the BE, the proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance as no trees or biologically sensitive areas will be impacted. The development will also not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan as no such plan has been adopted. As such, there is ***no impact***.

Mitigation Measures: None are required.

V. CULTURAL RESOURCES

Would the project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Cultural Resources are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 36 Code of Federal Regulations (CFR) §60.4, "historical" in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local level in a local register of historical resources, at the state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based

on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed "historic properties".

A Phase 1 Cultural Resource Assessment was prepared by Taylored Archaeology for the proposed Project dated May 2025, see Appendix C. The assessment included a California Historical Resources Information System (CHRIS) record search by Southern San Joaquin Information Center (SSJIC) for the Project on April 21, 2025. According to the search results, six previous investigations have been conducted within the Project area. These studies were conducted between 2000 and 2010. Of these six studies, only one study (KI-00114), completed in 2001, overlaps the Project boundary. The survey for KI-00114 was negative for cultural resources.

The SSJVIC records search results identified 10 previous investigations that have been conducted within the 0.5-mile radius. These studies were conducted between 1981 and 2019. None of these studies intersected the Project boundary. As the result of these studies, three cultural resources have been documented within a 0.5-mile radius of the Project area. These include two historic-era structures, the Southern Pacific Railroad (P-16-000122) and the Last Chance Ditch (P-16-000128) and one historical archaeological site (P-16-000068) of scattered historical debris along a partial covered irrigation ditch. The three cultural resources do not overlap the Project boundary. For a full description of the studies, see Tables 4-2 and 4-3 in the Cultural Resource Assessment, Appendix C.

In addition to the records search, Taylored Archaeology conducted an on-site pedestrian survey of the site on April 26, 2025. During the pedestrian survey the Project was comprised of alfalfa fields. Ground surface visibility was poor (0 to 5 percent) on most of the site due to alfalfa crops. The existing basin south of the alfalfa field had poor (0 to 5 percent) ground surface visibility due to annual grasslands and saplings). The low-lying area to the southwest of the alfalfa field had excellent ground surface visibility (100 percent) due to soil disturbance from heavy equipment. Rodent burrows and any related soil piles were closely examined for lithic scatters and for indications of buried deposits. The Project was accessible and surveyed. The basin and low-lying areas were opportunistically surveyed due to wet and muddy conditions, and slippery slopes.

No prehistoric or historic archaeological resources were identified during the pedestrian survey. The natural topography of the area has been altered by historical and modern agricultural practices and much of the land on the Project has been graded and plowed, which has caused additional disturbance to the soil.

RESPONSES

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation. There are no known historical resources on or near the subject property that would be impacted by the proposed Project. There are also no known archaeological resources located within the Project area.

Although no significant cultural or archaeological resources, paleontological resources or human remains have been identified in the project area, the possibility exists that such resources or remains may be discovered during Project site preparation, excavation and/or grading activities. Mitigation Measures CUL – 1 and CUL – 2 will be implemented to ensure that Project will result in ***less than significant impacts with mitigation***.

Mitigation Measures:

CUL – 1

Should evidence of prehistoric archeological resources be discovered during construction, the contractor shall halt all work within 25 feet of the find and the resource shall be evaluated by a qualified archaeologist. If evidence of any archaeological, cultural, and/or historical deposits is found, hand excavation and/or mechanical excavation shall proceed to evaluate the deposits for determination of significance as defined by the CEQA guidelines. The archaeologist shall submit reports, to the satisfaction of the City of Hanford, describing the testing program and subsequent results. These reports shall identify any program mitigation that the project proponent shall complete in order to mitigate archaeological impacts (including resource recovery and/or avoidance testing and analysis, removal, reburial, and curation of archaeological resources).

CUL – 2

In order to ensure that the proposed project does not impact buried human remains during construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Hanford with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be

halted until the Kings County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

In 2024, California was the fourth-largest total electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports the second-largest amount of electricity of any state.

Energy usage is typically quantified using the British thermal unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows:

Energy Source	**BTUs**[5]
Gasoline	120,429 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

Table 11 presents the electrical consumption in California by end-use sector.

[5] U.S. Energy Information Administration. Energy Units and Calculators Explained. https://www.eia.gov/energyexplained/index.php?page=about_energy_units. Accessed December 2025.

Table 11
2018 California Energy Consumption[6]

End User	BTU of energy consumed (in trillions)	Percentage of total consumption
Residential	1,166.6	17.1
Commercial	1,157.7	17.0
Industrial	1,456.7	21.4
Transportation	3,034.0	44.5
Total	**6,815**	--

REGULATORY SETTING

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Standards Code (Title 24, Part II, CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010 and the most recent update (2025) went on January 1, 2026. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring,

[6] U.S. Energy Information Administration. California State Profile and Energy Estimates. https://www.eia.gov/state/?sid=CA#tabs-1. Accessed November 2025.

carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2022 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building; planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

RESPONSES

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. The Project proposes the construction of 211 residential units that will result in additional energy consumption, as discussed below.

Construction

During Project construction there would be an increase in energy consumption related to worker trips and operation of construction equipment. This energy consumption will be short-term and temporary. There are not unusual project characteristics or construction processes that would require use of equipment that will be more energy intensive than used for comparable activities. Construction will include site preparation, building construction, paving and architectural coatings. The primary source of energy for construction will be diesel and gasoline.

All equipment shall conform to current emission standards and related fuel efficiencies including applicable California Air Resources Board (CARB) regulations, California Code of Regulations (Title 13, Motor Vehicles) and Title 24 standards. Compliance with these regulations would ensure that short-term, temporary construction activities do not result in wasteful, inefficient or unnecessary consumption of energy resources.

Operations

Project operation involves the heating, cooling, use of equipment, and vehicle trips. Operation of the 211 residential homes would be required to comply with energy efficiency standards as dictated by State and federal regulations including Tite 24 energy efficiency requirements and adopted energy efficient standards by the California Energy Commission.

Therefore, the Project is expected to comply with all energy efficiency standards and requirements and will have a ***less than significant impact.***

Mitigation Measure: None are Required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The proposed Project would comply with the versions of CCR Titles 20 and 24, including CALGreen, that are applicable at the time that building permits are issued. Part 11, Chapter 4 and 5, of the State's Title 24 energy efficiency standards establishes mandatory measures for residential and nonresidential buildings. Examples of these mandatory measures include solar, electric vehicle (EV) charging infrastructure, bicycle parking, energy efficiency, water efficiency and conservation, and material conservation and resource efficiency. Where applicable, the Project would comply with more stringent local regulations. In addition, the proposed Project would constitute

development within an area planned for residential development and would not be opening a new geographical area for development such that it would draw mostly new trips, or substantially lengthen existing trips. The proposed Project would be well positioned to accommodate the existing and planned population.

The Project would provide connectivity within the Project site and to adjacent uses. Compliance with these aforementioned mandatory measures and Project design features would ensure that the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

For the above reasons, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be ***less than significant.***

Mitigation Measures: None are Required.

VII. GEOLOGY AND SOILS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
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 18-1-B of the most recently adopted Uniform Building Code	☐	☐	☒	☐

	creating substantial risks to life or property?				
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

Hanford is located in the center of the Central Valley, which is a nearly flat northwest-southeast trending basin approximately 450 miles long and approximately 75 miles wide. The City of Hanford is located on soil types characterized by a thick section of sedimentary rock overlying a granitic basement layer. The soil types found in Hanford are not subject to annual flooding or ponding and are considered well-drained. The hazards due to ground-shaking are considered low due to the relative distance of the City from seismic faults. The nearest faults are the San Andreas Fault (approximately 46.5 miles to the southwest of the western boundary of the City) and the White Wolf Fault, located near Arvin and Bakersfield to the southwest in Kern County. The City of Hanford is located in Seismic Zone III, as defined by the California Uniform Building Code.

RESPONSES

a-i) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

a-ii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a-iii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a-iv) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact. The proposed Project site is located on an approximately 30,9-acre site, in central western Hanford, south of Lacey Blvd 12th Avenue and west of 12 ½ Avenue. The proposed site is not located in an earthquake fault zone as delineated by the 1972 Alquist-Priolo Earthquake Fault Zoning Map Act.[7] The nearest known potentially active fault is the San Andreas Fault, which is approximately 46.5 miles to the southwest of the western boundary of the City. No active faults have been mapped within the Project boundaries, so there is no potential for fault rupture. It is anticipated that the proposed Project site would be subject to some ground acceleration and ground shaking associated with seismic activity during its design life. The proposed Project site would be engineered and constructed in strict accordance with the earthquake resistant design requirements contained in the latest edition of the California Building Code (CBC) for Seismic Zone III, as well as Title 24 of the California Administrative Code, and therefore would avoid potential seismically induced hazards on planned structures.

The proposed Project site has a generally flat topography, which would preclude the likeliness of a landslide. The impact of seismic or landslide hazards on the Project would be ***less than significant.***

Mitigation Measures: None are required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The Project Applicant intends to develop 211 single-family residential units on an approximately 30.9-acre site. The site is currently within the City's limits. The development will also include access roads, parking, lighting and other associated improvements.

Construction activities associated with the Project involve ground preparation work for the new housing development and associated improvements. These activities could expose barren soils to sources of wind or water, resulting in the potential for erosion and sedimentation on and off the Project site. During construction, nuisance flow caused by minor rain could flow off-site. The contractor would be required to employ appropriate sediment and erosion control BMPs as part of a Stormwater Pollution Prevention

[7] Earthquake Hazard Zones, California Department of Conservation. https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed November 2025.

Plan (SWPPP) that would be required in the California National Pollution Discharge Elimination System (NPDES). As such, any impacts would be considered ***less than significant.***

Mitigation Measures: None are required.

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 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

Less Than Significant Impact. See Section VI a. above. The site is not at significant risk from ground shaking, liquefaction, or landslide and is otherwise considered geologically stable. The City of Hanford sits on top of a mix of different loam classifications; with the predominant soils in the proposed Project area being Nord fine sandy loam and Nord complex.[8] These soil types are characterized as well drained, with low runoff. These soils also have low shrink/swell potential, which is generally not conducive to liquefaction or expansion. Additionally, liquefaction typically occurs when there is shallow groundwater, low-density non-plastic soils, and high-intensity ground motion. The proposed Project is located on relatively flat agricultural fields and the threat of a landslide occurring on or adjacent to the Project site is considered low.

Subsidence is typically related to over-extraction of groundwater from certain types of geologic formations where the water is partly responsible for supporting the ground surface. The City of Hanford is recognized by the U.S. Geological Service as being in an area of subsidence.[9] The site would be designed in accordance with engineering design standards and structural improvement requirements to withstand the effects of soil settlement and collapsible soils. Engineered compacted fill would likely be used during construction in accordance with building code requirements, which would reduce the potential for lateral spreading or collapse of soils from Project construction.

Impacts are considered ***less than significant***.

[8] U.S. Department of Agriculture. Natural Resource Conservation Service. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/app/WebSoilSurvey.aspx. Accessed November 2025.

[9] U.S. Geological Service. Areas of Land Subsidence in California. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html Accessed November 2025.

Mitigation Measures:

None required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed Project does not include the construction, replacement, or disturbance of septic tanks or alternative wastewater disposal systems. The Project will be required to tie into the existing City sewer system (See Utilities section for more details). Therefore, there is ***no impact.***

Mitigation Measures: None are required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation. As identified in the cultural studies performed for the Project site (see Appendix B), there are no known paleontological resources on or near the site. Mitigation measures have been added that will protect unknown (buried) resources during construction, including paleontological resources. There are no unique geological features on site or in the area. Therefore, there is a ***less than significant impact*** with mitigation measures implemented.

Mitigation Measures: See CUL-1, CUL-2 and CUL-3

VIII. GREENHOUSE GAS EMISSIONS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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 gases?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect. Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), ozone, Nitrous Oxide (NO_x), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality and supply. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of

the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. Snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

REGULATORY SETTING

Federal

The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO_2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that CO_2, CH_4, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State

California is taking action to reduce GHG emissions. In June 2005, Governor Schwarzenegger signed Executive Order S-3-05 to address climate change and GHG emissions in California. This order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

In addition, the proposed Project is being evaluated pursuant to CEQA.

Local

San Joaquin Valley Air Pollution Control District (SJVAPCD)

In August 2008, the SJVAPCD adopted the Climate Change Action Plan, which directed the SJVAPCD to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions on global climate change.

In 2009, the SJVAPCD adopted the guidance document: Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA. This document recommends the usage of performance-based standards, otherwise known as Best Performance Standards (BPS), to assess the significance of project-specific greenhouse gas emissions on global climate change during the environmental review process. Projects implementing BPS in accordance with SJVAPCD's guidance would be determined to have a less than significant individual and cumulative impact on greenhouse gas emissions and would not require project specific quantification of greenhouse gas emissions.[10]

RESPONSES

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction: Greenhouse gases would be generated during construction from activities including site demolition, site preparation, grading, building construction, application of architectural coatings, and paving. GHG emissions for the Project were estimated to be approximately 1,157 metric tons of carbon dioxide equivalent per year (MTCO2E/year) for construction, Table 12 below and Table 13 for operations. The analysis was completed utilizing the CalEEMod Modeling Software. The full analysis can be found in Appendix A.

[10] SJVAPCD. Guidance for Assessing and Mitigating Air Quality Impacts. February 19, 2015. Page 112. https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed November 2025

Table 12
Estimated Construction Related Greenhouse Gas Emissions (Tons/Year)

Phase	N2O	CH4	CO2	MTCO2E/yr
Year 1	0.031	0.106	561	519
Year 2	0.067	0.030	585	548
Year 3	0.006	0.005	97.4	89.9

Operation: Implementation of the proposed Project would result in long-term greenhouse gas emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. Total GHG operational phase plus amortized construction phase emissions for the Project were estimated using the CalEEMod model, which estimates emissions to be approximately 2,267 MCO2E/year, Table 13 below. Mobile emissions were estimated to be the primary source of GHG emissions.

Table 13

Estimated Operational Greenhouse Gases

Phase	Unit	N_2O	CH_4	CO_2	$MTCO_2E/yr$
Operational Phase without Resident Vehicle* Emissions	Tons/yr	0.005	0.140	209	194
Operational Customer with Resident Emissions	Tons/yr	0.0721	0.012	2,265	2,073
Total Operations Emissions	**Tons**	**0.077**	**0.152**	**2,474**	**2,267**
Total Operational Phase Plus Amortized Construction Phase Emissions $MTCO_2E$/year*					**2,306**

*Notes: * - Construction GHG emissions were amortized over 30 years.*
Total emissions numbers may not add up due to rounding.

The SJVAPCD has not established a numeric threshold for GHG emissions. The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (e.g., a CAP). Neither the City nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, the proposed Project was analyzed for consistency with the 2022 Scoping Plan.

The 2022 Scoping Plan includes key project attributes that reduce operational GHG emissions in Appendix D, Local Actions, of the 2022 Scoping Plan. As discussed in Appendix D of the 2022 Scoping Plan, absent consistency with an adequate, geographically specific GHG reduction plan such as a CEQA-qualified CAP, the first approach the State recommends for determining whether a proposed residential

or mixed-use residential development would align with the State's climate goals is to examine whether the Project includes key project attributes that reduce operational GHG emissions. The Project's consistency with key project attributes from the 2022 Scoping Plan that would be applicable to residential and mixed-use development is shown in Table 14.

Table 14

Project Consistency with the 2022 Scoping Plan Key Residential Project Attributes that Reduce GHGs

Priority Areas	Key Project Attribute	Project Consistency
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious standards.	Consistent. CALGreen Code requires provision of infrastructure to accommodate EV chargers. The proposed Project will be consistent with the requirements set forth in the CALGreen Code.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	Consistent. The Project site is surrounded by agriculture and residential development. As detailed in the Transportation section of this document, the proposed Project screens out of VMT analysis due to its small size and consistency with the General Plan Land Use Designation. Additionally, a transit stop is approximately 0.19 miles to the west of the site.
	Does not result in the loss or conversion of natural and working lands.	Consistent. The proposed Project site is fallowed agricultural land and a rural residence. The site has been designated for residential development by the City of Hanford General Plan and is zoned for residential development by the Zoning

		Ordinance. As such, any impacts resulting from agricultural conversion were assessed at the time the land was designated for residential development. No new conversion impacts would result with Project implementation and the Project is consistent with this key project attribute.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre) or is in proximity to existing transit stops (within a half mile) or satisfies more detailed and stringent criteria specified in the region's SCS	Consistent. The Project site is located within 0.5 miles of two transit stops. The Centennial at Target stop is approximately 0.41 miles to the east while the Lacey at Four Seasons stop is 0.2 miles to the west. The Project is consistent with this key project attribute.
	Reduces parking requirements by eliminating parking requirements or including maximum allowable parking ratios (i.e,. the ratio of parking spaces to residential units or square feet); or providing residential parking supply at a ratio of less than one parking space per dwelling unit; or for multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	Consistent. The proposed Project would consist of 211 single family residential units and would be consistent with the City's parking requirements for single family homes. Thus, the Project would be consistent with the intent of this key project attribute.
	At least 20% of units included are affordable to lower-income residents.	Consistent. While the Project does not include affordable housing units, the median household income in 2023 in

		California was $96,334.[11] The median household income in 2023 in the City of Hanford is $73,544, which is approximately 23% less than the state average. Comparatively speaking, residents in the Hanford area have a lower income than the State median. The Project would be consistent with the intent of this key project attribute.
	Results in no net loss of existing affordable units.	Consistent. No affordable housing units would be lost as a result of Project implementation. The Project would be consistent with this key project attribute.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooling.	Consistent. The proposed Project would be all electric, which is consistent with this key project attribute.

Residential projects that have all of the key project attributes as outlined in Table 14 would be considered to accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals as outlined in the 2022 Scoping Plan. As demonstrated in Table 14, the proposed Project would be consistent with the 2022 Scoping Plan key residential project attributes. As such, the Project's generation of GHG emissions would result in a ***less than significant impact*** on the environment.

Mitigation: None are Required.

[11] United States Census Bureau. QuickFacts. https://www.census.gov/quickfacts/fact/table/hanfordcitycalifornia,CA. Accessed December 2025.

d) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The City of Hanford adopted a Regional Climate Action Plan (CAP) in coordination with Kings County. The CAP includes a GHG inventory, a benchmarking/goal setting project and identified a reduction target for 2020. Although the CAP does not include a target for reduction in 2030, the measures in the plan will continue to provide reductions and help demonstrate continued progress in achieving the SB32 target for 2030.

The Regional CAP included policies that support emission reductions from new development. The Project contains features that been evaluated for consistency with policies in the CAP and found consistent as summarized below in Table 15.

Table 15

Consistency with the Regional Climate Action Plan Policies

E-4.1 Encourage local homebuilders to participate in the New Solar Homes Partnership to install solar PV systems on qualifying new homes. **Consistent.** The proposed Project will comply with the latest CALGreen solar readiness and installation requirements.
E-4.2 Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines. **Consistent.** The proposed Project will comply with the latest CALGreen solar readiness and installation requirements.
E-5.2 Provide project applicants with green building resources, including the SJVAPCD's Best Performance Standards list for GHG reductions, and promote workshops offered by community organizations **Consistent.** The proposed Project would include sustainability features in the project design in accordance with SJVAPCD requirements, CALGreen, and City of Hanford standards.
TL-1.1 Support and encourage mixed-use and medium- and high-density land use categories located within ¼ mile of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning and/or density bonuses for applicable projects. **Consistent**. The Project is located within 0.36 mile of a transit stop. The development and the area surrounding the development provide a range of residential densities.

TL-1.3 Allow live/work developments that permit residents to live at their place of work and thereby reduce VMT and associated GHG emissions. **Consistent.** The proposed Project includes residential uses within close proximity of commercial facilities that will potentially allow employees of the commercial areas to live within walking distance.
TL-2.3 Establish minimum design criteria for bicycle and pedestrian circulation and implement through the design review process. **Consistent.** The proposed Project would provide pedestrian infrastructure connecting to neighboring uses.
TL-2.5 Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking facilities and internal bicycle and pedestrian routes, where feasible. **Consistent.** The proposed Project would comply with all applicable City design standards related to safe bicycle and pedestrian circulation.
TL-3.4 Support and encourage new development that provides safe routes to adjacent transit stops, where applicable. (Community) **Consistent.** The proposed Project would comply with City design standards that provide a safe route to a nearby transit stop.

Source: King County Association of Governments Regional Climate Action Plan

The proposed Project would incorporate features that would minimize GHG emissions, as summarized above. These feature are consistent with the Regional CAP. As such, the Project will not conflict with plans, policies and regulations pertaining to GHG's, therefore impacts would be considered ***less than significant.***

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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 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 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 a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The proposed Project site is located in the western portion of the City of Hanford. The site currently supports agricultural row crops.

RESPONSES

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 release of hazardous materials into the environment?

Less Than Significant Impact. The Project Applicant intends to develop 211 single-family residential units on an approximately 30.9-acre site. The site is currently within the City limits, south of Lacey Blvd west of Avenue 12 ½. The development will also include access roads, parking, lighting and other associated improvements.

Lands surrounding the proposed Project are agricultural row crops, a basin, rural residences, single family residential developments and active agriculture.

A Phase 1 Assessment was prepared by Paul Humphrey, EP dated February 13, 2025. The Phase 1 included a review of records, interviews and a site reconnaissance visit, full report can be found in Appendix D. The results of the Phase 1 are summarized below.

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-21 as: (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. Paul Humphrey, EP's assessment has revealed the following RECs associated with the Subject Property or nearby properties:

• No on-site RECs were identified during the course of this assessment.

Controlled Recognized Environmental Conditions (CRECs) are defined by the ASTM Standard Practice E1527-21 as a recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations). Paul Humphrey, EP's assessment has revealed the following CRECs associated with the Subject Property or nearby properties:

• No on-site CRECs were identified during the course of this assessment.

Historical Recognized Environmental Condition (HREC) is defined by the ASTM Standard Practice E1527-21 as a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). Paul Humphrey, EP's assessment has revealed the following HRECs associated with the Subject Property or nearby properties:

• No on-site HRECs were identified during the course of this assessment.

There is no reasonably foreseeable condition or incident involving the Project that could result in release of hazardous materials into the environment, other than any potential accidental releases of standard fuels, solvents, or chemicals encountered during typical construction of a residential subdivision. Should an accidental hazardous release occur or should the Project encounter hazardous soils, existing regulations for handling hazardous materials require coordination with the California Department of Toxic Substances Control for an appropriate plan of action, which can include studies or testing to determine the nature and extent of contamination, as well as handling and proper disposal. Therefore, potential impacts are ***less than significant.***

The operational phase of the proposed Project would occur after construction is completed and residents move in to occupy the residential structures. The proposed Project will include land uses that are considered compatible with the surrounding uses. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as household and commercial cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely

release of hazardous materials into the environment occur. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be ***less than significant***.

Mitigation Measures: None are required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are no schools located within the 0.25-mile radius of the proposed Project site. The College of the Sequoias Hanford Education Center and the Sierra Pacific Hight school are approximately one-half mile north of the proposed Project site. As the proposed Project includes the development of single-family residences, it is not reasonably foreseeable that the proposed Project will cause a significant impact by emitting hazardous waste or bringing hazardous materials within one-quarter mile of an existing or proposed school. Residential land uses do not generate, store, or dispose of significant quantities of hazardous materials. See also Responses *a.* and *b.* above regarding hazardous material handling. There would be a ***less than significant impact.***

Mitigation Measures: None are required.

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?

No Impact. A database search was conducted to identify recorded hazardous materials incidents in the Project area. The search included cleanup sites under Federal Superfund (National Priorities List), State Response, and other federal, state, and local agency lists. The proposed Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Geotracker[12] and Envirostor[13] databases). There is ***no impact.***

Mitigation Measures: None are required.

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[12] Geotracker Database, California State Water Resources Control Board. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Hanford. Accessed December 2025..

[13] EnviroStor Database, California Department of Toxic Control Substances. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Hanford. Accessed December 2025.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Less Than Significant Impact. There are no private or public airstrips in the Project vicinity. The Hanford Municipal Airport is located approximately 4.5 miles to the southeast of the proposed Project site. Thus, any impacts are ***less than significant***.

Mitigation Measures: None are required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The Project has been designed for adequate emergency access and has been reviewed by the City. The internal roadways will be designed with sufficient clearances for emergency vehicles to access the entire site. Therefore, the Project will not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Any impacts are ***less than significant***.

Mitigation Measures: None are required.

g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The site is completely surrounded by actively managed agricultural land or residential development and the site itself is in agricultural production. There are no wildlands on or near the Project site. There is ***no impact***.

Mitigation Measures: None are required.

X. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

X. HYDROLOGY AND WATER QUALITY

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The City of Hanford is located in the Tulare Lake hydrologic region, specifically within the Kings Sub-basin of the San Joaquin Valley groundwater basin.[14] The Kings Subbasin encompasses approximately 1,530 square miles within Fresno, Tulare and Kings counties. The Kings Subbasin is designated as a critically over-drafted high priority basin by the Department of Water Resources. The existence of overdraft in the Kings Subbasin is documented by historical decline in ground water levels and is confirmed by the historical water budgets presented by the Mid-Kings River Groundwater Sustainability Agency and the Alta Irrigation District.[15] Hanford has a groundwater depth of up to 300 feet below the surface.[16]

RESPONSES

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

[14] City of Hanford, General Plan Update Draft Environmental Impact Report, December 2006. Page 3 – 74.

[15] City of Hanford 2020 Urban Water Management Plan. October 2021. https://www.cityofhanfordca.com/DocumentCenter/View/567/2020-Urban-Water-Management-Plan-PDF. Accessed December 2025.

[16] Ibid.

Less Than Significant Impact. The proposed Project site is currently comprised of agricultural row crops. Grading, excavation and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

Three general sources of potential short-term construction-related stormwater pollution associated with the proposed Project are: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion and transportation, via storm runoff or mechanical equipment. Generally, routine safety precautions for handling and storing construction materials may effectively reduce the potential pollution of stormwater by these materials. These same types of common sense, "good housekeeping" procedures can be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are also common sources of stormwater pollution and soil contamination. In addition, grading activities can greatly increase erosion processes. Two general strategies are recommended to prevent construction silt from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed. Secondly, the area should be secured to control offsite migration of pollutants. These Best Management Practices (BMPs) would be required in the Stormwater Pollution Prevention Plan (SWPPP) to be prepared prior to commencement of Project construction. When properly designed and implemented, these "good-housekeeping" practices are expected to reduce short-term construction-related impacts to less than significant.

In accordance with the National Pollution Discharge Elimination System (NPDES) Stormwater Program, the Project will be required to comply with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement.

The City of Hanford will provide water to the Project site and the Project will be required to tie into the City's existing water service infrastructure. The Project will comply with all City ordinances and standards to assure proper grading and drainage. Compliance with all local, state, and federal regulations will prevent violation of water quality standards or waste discharge requirements. The Project will be required to prepare a grading and drainage plan for review and approval by the City Engineer, prior to issuance of building permits. Therefore, any impacts will be ***less than significant***.

Mitigation Measures: None are required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. Site development will result in an increased demand for water. The City of Hanford relies on groundwater as its sole water supply source. The City currently operates 15 water supply wells, 3.5 million gallons of storage tanks, and over 15,600 individual connections to the City system.[17]

The City of Hanford is part of the Mid-Kings River Groundwater Sustainability Agency (KREGSA) which prepared a Groundwater Sustainability Plan (GSP) of which the City of Hanford is a participant. The City adopted its latest Urban Water Management Plan (UWMP) in December 2021. The UWMP states that with implementation of the projects and management actions identified in the KREGSA GSP, the City's groundwater supplies are anticipated to be sustainable and available to meet the projected demands of its Public Water System service area.[18]

The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. According to the City of Hanford 2020 UWMP the demand for water in 2020 was 11,714 acre feet. In 2020, single family uses used 6,903 AF, which accounted for 59 percent of the total water used. The proposed Project consists of 211 dwelling units and the average household size in Hanford is 3.08 people; therefore, the Project would house approximately 650 people. According to the UWMP, the amount of groundwater predicted to be pumped in 2020 was 11,714 acre feet or 10.4 million gallons per day. The 211-lot subdivision would be expected to use approximately 111,150 gallons of water per day (people (650) x 2020 average gallons per day per person (171)) under normal operation, including domestic and landscape irrigation. This equates to approximately 124.5 acre feet per year. Although the Project would utilize groundwater for domestic purposes, the amount of water used is not considered significant and would not substantially lower the groundwater table of the aquifer or interfere substantially with the recharge of the underground aquifer.

Additionally, the site has been planned for residential development in the General Plan and as such, has been accounted for in the City's infrastructure planning documents, including the 2020 UWMP. Thus,

[17] City of Hanford. Water System. https://www.ci.hanford.ca.us/1564/Utility-Division. Accessed January 2026.

[18] Ibid.

the Project demands for groundwater resources have been planned for. Proposed Project implementation would not substantially deplete groundwater supplies and/or otherwise interfere with groundwater recharge efforts being implemented by the City of Hanford. Future demand can be met with continued groundwater pumping and conservation measures. Additionally, compliance with existing State regulations will ensure that impacts to groundwater supply will be ***less than significant.***

Mitigation Measures: None are required.

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 offsite;

   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?

Less Than Significant Impact. Lands surrounding the proposed Project are agricultural row crops, a ponding basin, rural residences and single family developments.

The proposed Project will change drainage patterns of the site through the installation of impervious surfaces and structures (houses, driveways, streets, etc.) and will be required by the City to be graded to facilitate proper stormwater drainage into the storm basin located to the southeast of the Project site. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP will be retained on-site during construction.

The proposed Project site is located outside of any Special Flood Hazard Areas or Other Areas of Flood Hazard, as indicated by FEMA flood hazard map 06031C0185C, effective 6/16/2009. The proposed development will be built in accordance with the current City ordinances and California Building Code regarding construction in flood zones. The Project will be designed for adequate storm drainage. Accordingly, the chance of flooding (and therefore the release of pollutants due to flooding) at the site is remote. Impacts are ***less than significant.***

Mitigation Measures: None are required.

d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. As discussed in Impact X(c), the proposed Project site is located outside of any Special Flood Hazard Areas or Other Areas of Flood Hazard. The Project includes development of adequate storm drainage. The proposed development will be required to prepare and submit a water quality control plan to be implemented during construction, as required by the National Pollutant Discharge Elimination System. This plan will be reviewed and approved by the City Engineer prior to the start of construction.

There are no inland water bodies that could be potentially susceptible to a seiche in the Project vicinity. This precludes the possibility of a seiche inundating the Project site. The Project site is more than 100 miles from the Pacific Ocean, a condition that precludes the possibility of inundation by tsunami. There are no steep slopes that would be susceptible to a mudflow in the Project vicinity, nor are there any volcanically active features that could produce a mudflow in the City of Hanford. This precludes the possibility of a mudflow inundating the Project site. Any impacts are ***less than significant***.

Mitigation Measures: None are required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The Project will not conflict with any water quality control plans or sustainable groundwater management plan. However, as mentioned in Section c., all new development within the City of Hanford Planning Area must conform to standards and plans contained in the Hanford Stormwater Drainage Master Plan. By conforming to all standards and policies as outlined, there will be ***no impacts*** associated with the Project.

Mitigation Measures: None are required.

XI. LAND USE AND PLANNING

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project site is inside the western City limit of Hanford. The City of Hanford lies in the Central San Joaquin Valley region, in the northwestern portion of Kings County. State Route (SR) 198 runs east-west through the southern portion of the City and SR 43 runs north-south around the eastern boundary. The site is currently designated for low density residential by the City of Hanford General Plan and zoned R-L-5, which has a required density of between two to ten units per acre.

RESPONSES

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed Project includes development of 211 single-family residential units on an approximately 30.9-acre site. The site is in the western portion of the City and lands surrounding the proposed Project are agricultural row crops, a ponding basin, rural residences and single-family residential developments.

The proposed Project site has a current land use designation of Low Density Residential in the General Plan and zoned R-L-5 Single Family Residential. The Project includes an application for a Planned Unit Development (PUD) to allow a variety of lot sizes, while still meeting the densities in the General Plan.

The Project will create 211 units on 30.9 acres, which is a density of 6.82 units per acre, which is consistent with the Land Use Element of the General Plan density of Low Density of 2 to 10 units per acre.

The Project would provide housing opportunities for the residents of Hanford and improve access to existing surrounding areas. The proposed development has no characteristics that would physically divide the City of Hanford. Any impacts will be ***less than significant impact.***

Mitigation Measures: None are required.

XII. MINERAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

According to the Hanford 2035 General Plan Background Report, the only significant mineral commodities that have been found within the Hanford Planning Area are sand and gravel for road and building construction. At this time there are no known significant deposits, and no active mines.

RESPONSES

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?

No Impact. There are no known mineral resources in the proposed Project area and the site is not included in a State classified mineral resource zones. No mineral resource locations are within the vicinity of the City of Hanford.[19] Therefore, there is ***no impact***.

Mitigation Measures: None are required.

[19] City of Hanford General Plan Update Background Report, October 2006. Page 9-12.

XIII. NOISE

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Noise is often described as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. The City of Hanford is impacted by a multitude of noise sources. Principal noise sources include traffic on roadways, agricultural noise and industrial noise. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities, and they are predominant sources of noise in the City. The Project site is located in an area with a mix of uses. The predominant noise sources in the Project area include traffic on local roadways, residential noise (lawn mowers, audio equipment, voices, etc.), and potential noise from the nearby agricultural land uses.

RESPONSES

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?

Less Than Significant Impact.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources. Typical construction related equipment include graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Table 16 indicates the anticipated noise levels of the typical construction-related equipment (i.e., graders, trenchers, tractors) based on a distance of 50-feet between the equipment and the sensitive noise receptor.[20]

Table 16
Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Dozer	85
Generator	82
Grader	85
Jack Hammer	88
Loader	85
Paver	85
Truck	84

The closest noise sensitive receptors are the school and the residents of the single-family and multiple family residential properties to the east. The Hanford Municipal Code (HMC) Section 9.10.060(A)(10)

[20] The Noise and Vibration Impact Assessment Manual, Federal Transit Administration, U.S. Department of Transportation. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Table 7-1. Accessed December 2025.

does limit construction noise to between the hours of 7:00 a.m. and 8:00 p.m. The Project construction will be required to limit construction noise to these hours.

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

Long-term (Operational) Noise Impacts

The primary source of on-going noise from the Project will be from vehicles traveling on internal access roads and from traffic traveling along Lacey Blvd. The Project will result in an increase in traffic on some roadways in the Project area. However, the relatively low number of new trips associated with the Project is not likely to increase the ambient noise levels by a significant amount. The area is active with vehicles, residential housing, and agricultural land uses, so the proposed Project will not introduce a new significant source of noise that isn't already occurring in the area. The City Municipal Code does not contain specific noise standards for motor vehicles and other noise sources; however, the General Plan contains guidelines that limit exterior noise levels for residential and schools to 60 – 70 dBA CNEL.

Because noise generated from construction would be temporary and operational noise from the residential will be required to comply with HMC Section 9.10, impacts are determined to be ***less than significant.***

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. Construction associated with the proposed Project includes construction of 211 single-family residences. The site construction will also include internal access roads, street lighting, site landscaping and additional related improvements.

The approximate threshold of vibration perception is 65 VdB, while 85 VdB is acceptable only if there are an infrequent number of events per day. Table 17 describes the typical construction equipment vibration levels.[21]

Table 17
Typical Construction Vibration Levels

Equipment	VdB at 25 ft
Small Bulldozer	58
Jackhammer	79

The primary vibration-generating activities associated with the proposed Project would occur when grading of the site is conducted, and when infrastructure such as utilities, and foundations are constructed. Operating cycles for the types of construction equipment used during construction may involve one or two minutes of full power operation followed by three or four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

While there are residences to the east of the proposed Project, vibratory compactors/rollers would be used only on a limited and interval basis during compaction, and would be moving throughout the site, instead of stationary or operated long-term in the same location to the extent it would damage buildings due to longer-term extended use.

Vibration from construction activities will be temporary and not exceed the Federal Transit Administration (FTA) threshold for the nearest rural residences to the Project site. Therefore, the impact is considered ***less than significant.***

Mitigation Measures: None are required.

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?

[21] The Noise and Vibration Impact Assessment Manual, Federal Transit Administration, U.S. Department of Transportation. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Table 7-1. Accessed December 2025.

No Impact. According to the Kings County Airport Land Use Plan, the Project is not located in an airport land use plan. The Project is approximately four and one-half miles from the Hanford public airport. The Project is outside the anticipated noise contours as shown on the Airport Compatibility Zone Map in the General Plan Background Report. Therefore, there is ***no impact***.

Mitigation Measures: None are required.

XIV. POPULATION AND HOUSING

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The California Department of Finance determined that as of January 1, 2025, the Hanford population is 61,238.[22] The average household size, as determined in the U.S. Census Bureau was 3.08 persons.[23]

RESPONSES

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

[22] California Department of Finance. Report: 108,000 More Californians in 2024: Total State Population Tops 39.5 Million. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://dof.ca.gov/media/docs/forecasting/Demographics/estimates/E-1_2025_Press_Release.pdf. Accessed December 2025.

[23] Ibid.

Less Than Significant Impacts. There will be 211 new homes associated with the proposed Project. The site would provide additional housing for approximately 650 people. The site is currently inside the western City limits of Hanford and is designated and zoned for residential development. As such, the increase in population has been accounted for in the City's General Plan and associated General Plan Environmental Impact Report. Entitlements needed to accommodate the proposed Project include Planned Unit Development and a Tentative Subdivision Map.

The City of Hanford's primary industry is agriculture, but there is a sufficient labor force in the area to support many other types of industries, as the regional unemployment rate in August 2025 was 8.9%.

The proposed Project will alleviate some overcrowding in the regional population by contributing reliable housing and will additionally provide temporary construction jobs to the local workforce.

The site is currently in agricultural production and does not contain any houses, as such, no houses will be displaced with Project implementation.

In conclusion, the Project implementation will not displace people and instead provide needed housing. Any impacts are considered ***less than significant***.

Mitigation Measures: None are required.

XV. PUBLIC SERVICES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. 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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The Hanford Fire Department is located at 350 W, Grangeville Boulevard in Hanford, approximately 2.3 miles northeast of the Project site. The Hanford Fire Department offers a full range of services including fire/rescue, emergency medical treatment and transport, fire prevention, and hazardous materials first response.

Police protection services are provided by the Hanford Police Department, which is approximately 2.5 miles northeast of the Project site at 680 South Alta Avenue, Hanford. The Hanford Police Department provides a full range of police services.

Educational services are provided by the Hanford Unified School District (DUSD). Hanford Unified School District operates eleven schools within the planning area; six elementary schools, one middle

school, one traditional high school, one continuing education school, one independent study school, and one adult education school.

RESPONSES

a) 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:

Fire protection?

Less Than Significant Impact. The Hanford Fire Department (HFD) will provide fire protection services to the proposed development. The nearest fire station to the site is approximately 2.3 miles to the northeast.

The HFD follows the International City/County Management Association (ICMA) Yearbook for guidelines. The Yearbook recommends 1.02 firefighters per 1,000 residents. In 2013, the department had 27 fire suppression personnel for 55,470 residents, a ratio of 0.49. The station would currently need 58 fire suppression personnel to meet the standard. The addition of 211 residential units proposed with Project development will increase the demand for fire protection services. The existing fire stations are placed to provide optimum service; however, new stations will be needed to support the expanding city. The demand for additional personnel and equipment will be compensated for by the development impact fee of $546.39 per unit of Low-Density Housing. To support the expansion of fire services, the total development impact fee is $115,288.29. The timing of when new fire service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded fire service facilities become necessary, construction or expansion would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. However, payment of Fire Impact Fees will reduce impacts associated with new and altered governmental facilities. Therefore, the impact is ***less than significant.***

Police Protection?

Less Than Significant Impact. The Hanford Police Department (HPD) will provide services to the proposed development. The HPD headquarters are located approximately 2.5 miles northeast of the

proposed Project site. The development would increase the demand for police service with the addition of 240 residential units. The HPD seeks a service standard of 1.1 to 1.2 sworn officers per 1,000 residents. In 2013, the Department had 55 sworn officers for 55,470 residents, a ratio of .99. The Department seeks at least 10 new officers for the growing city. The demand for additional officers and equipment will be compensated by the development impact fee of $296.50 per unit of Low-Density Housing. The total development impact fee for police protection services would be $62,561.50. The timing of when new police service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts on a potential future facility would be speculative. As new or expanded police service facilities become necessary, construction or expansion Projects would be subject to their own separate CEQA review to identify and mitigate any potential environmental impacts. Additionally, the impact will be reduced by paying Police Impact Fees to account for the increased demand for police services caused by the Project. Therefore, the impact is ***less than significant.***

Schools?

Less Than Significant Impact. The proposed Project is within the Hanford Elementary School District (HEUSD) and the Hanford Joint Union High School District (HJUHSD). According to the AUESD, HESD, and HJUHSD Development Fee Justification Study, the residential student generation rates[24] are as follows:

HESD – Grades TK-8 Total: 0.406

HJUHSD – Grades 9-12: 0.180

Since the proposed Project includes the addition of 211 single-family homes, the number of Tk-8 grade students will increase by approximately 86 while the number of 9-12 grade students will increase by approximately 38, for a total of 124 students. The proposed Project site is located within the City limits and is designated and zoned for residential development. Growth associated with the Project has been planned and expected. In addition to the goals and policies of the City's General Plan, future development is required to pay development impact fees to the school districts at the time of building

[24] AUESD, HESD, and HJUHSD Development Fee Justification Study. Odell Planning & Research, Inc. Table B-3. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://resources.finalsite.net/images/v1652275949/hesdk12caus/ruavlzeog3pxdhfpyqjt/FeeStudy2022-HJUHSDHESDAUESDFinal.pdf#:~:text=Based%20upon%20past%20development%20activity%20and%20reasonable,in%20the%20next%20ten%20years%20in%20HESD. Accessed January 2026.

permit issuance. The City of Hanford charges $4.08 per square foot of residential development. The exact square footage for the housing has yet to be determined, however, the Project will pay its fair share in fees for schools. Therefore, the impact is ***less than significant.***

Parks?

Less Than Significant Impact. The proposed Project includes the construction of a 211 single family residential development. The closest park to the proposed Project is Rotary Park, approximately 1.05 miles to the northeast. The Project will be required to pay City Park facility impact fees to compensate for any service demand increase on existing parks within the Hanford area. The Project applicant would be required to comply with the Municipal Code and Ordinances. Impacts are ***less than significant.***

Other public facilities?

Less Than Significant Impact. The proposed Project is within the land use and growth projections identified in the City's General Plan and other infrastructure studies. The Project, therefore, would not result in increased demand for, or impacts on, other public facilities such as library services. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

XVI. RECREATION

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City has a total of twenty-one parks available for use. These include neighborhood parks, such as Coe Park, community parks, such as Hidden Valley Park, and special use parks, such as the Harris Street Ball Park. These parks are managed by the City of Hanford's Parks and Community Services Department. This department also supervises and coordinates a wide variety of community programs and activities.

RESPONSES

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?

Less Than Significant Impact. The Project Applicant intends to develop 211 single-family residential units on an approximately 30.9-acre site. No park is proposed with the development and as such, the proposed Project will be subject to pay the park impact fees which will offset the parkland not provided in the development, in accordance with Hanford Municipal Code Section 15.44.020. The future park

construction will undergo separate environmental review at the time it is developed. Impacts are considered ***less than significant.***

Mitigation Measures: None are required.

XVII. TRANSPORTATION/TRAFFIC

Would the project:

		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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.	Would the project 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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project is a proposal to develop residential uses on a 30.9 acre parcel located south of West Lacey Boulevard, west of 12½ Avenue. The Project is bisected by future Millenium Way, a collector street as designated in the Hanford 2035 General Plan. The Project is in the vicinity of the following arterials: Lacey Boulevard and 12th Avenue. State Route 198 is located approximately one-third of a mile to the south.

The City of Hanford has adopted the Vehicle Miles Traveled (VMT) Thresholds and Implementation Guidelines (VMT Guidelines) to address the issue VMT in accordance with CEQA Guidelines. The City VMT Guidelines contains thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed VMT analysis. Screening thresholds include:

1. Residential and office projects within a Transit Priority Area

2. Locally serving retail projects with a combined area of up to 55,000 square feet

3. Redevelopment projects that result in equal or net reduction in VMT.

4. 100 percent affordable housing projects

5. Projects that are consistent with the General Plan and generate fewer than 1,000 average daily trips

A development project meeting one or more of the above attributes may be presumed to produce a less than significant VMT impact.

Vehicular Access: Vehicular access to the Project will be to 12 ½ Avenue (to be named Aquifer Drive) and Millenium Way as collector streets. The Project has been designed to provide future connections to the north and west of the Project.

Pedestrian and Cyclist Connectivity: The Project will install sidewalks along all arterial and collector streets as well internal local streets in accordance with City development standards.

REGULATORY SETTING

Federal

Federal Transit Administration.

The Federal Transit Administration (FTA) is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by Title 49 of the United States Code, which states the FTA's interest in fostering the development and revitalization of public transportation.

Americans with Disabilities Act of 1990.

Titles I, II, III, IV, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and nonprofit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Standards for Accessible Design, which establish minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

State

Senate Bill (SB) 743.

On September 27, 2013, Governor Jerry Brown signed SB 743 into law and codified a process that changed transportation impact analysis as part of CEQA compliance. SB 743 directs the California Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions that removes

automobile vehicle delay and LOS or other similar measures of vehicular capacity or traffic congestions from CEQA transportation analysis. Rather, it requires the analysis of VMT or other measures that "promote the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses," to be used as a basis for determining significant impacts to circulation in California. The goal of SB 743 is to appropriately balance the needs of congestion management with statewide goals related to reducing GHG emissions, encourage infill development, and promote public health through active transportation.

RESPONSES

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

Less Than Significant Impact. The Project consists of the construction of 211 single family residential units as well as on-site circulation-related infrastructure improvements, including new local residential streets. A traffic Study was prepared by C2 Consulting, July 2025, Appendix E, which was signed off by the City on September 16, 2025. The City requested that the following intersections be studied as part of the traffic study.

1) 12 ½ Avenue at Millenium Way (future)

2) 12 ½ Avenue at Lacey Blvd

3) Centennial Drive at Millenium Way

4) Centennial Drive at Lacey Blvd (signalized)

5) Centennial Drive/Mall Drive at 12th Avenue (signalized)

The TIS included a Level of Service (LOS) analysis for the following scenarios:

1) Existing

2) Existing plus the Millenium Estates Project

3) Existing plus the Millenium Estates Project (mitigated, if necessary)

Level of Service (LOS) Standard The City of Hanford's Transportation Element Policy T29 sets the maximum Level of Service at "E" on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. The City has set a peak hour

Level of Service of "D" on all other streets and intersections with the Planned Growth Boundary.

New trips generated by the Millenium Estates project were estimated using the Institute of Transportation Engineer's Trip Generation Manual. This publication provides average rates of trip generation for different land uses and relates these to dwelling units (residential). Trip generation rates are provided for weekdays along with the proportion of trips that are inbound or outbound from the development. The resulting Project trip generation is 147 trips in the AM peak hour and 200 trips in the PM peak hour. The Project is estimated to generate a total of 2,0006 daily trips.

The LOS for all intersections was calculated for Existing plus Project. In addition, City staff requested that the intersection of Centennial Drive at Millenium be studied at Existing plus previously approved projects plus Millenium Estates, see Supplemental to the Traffic Study. As illustrated below, all intersections are calculated to operate at or above the City's LOS minimum of "D" therefore no mitigations are required and impacts are considered ***less than significant.***

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

No Impact. The City of Hanford VMT Guidelines were used to evaluate consistency with CEQA Guidelines Section 15064.3. According to the guidelines, the Project is screened out from further review because it is in a low VMT area. Utilizing the City of Hanford VMT Screening Tool, the parcel has a VMT of 2.9 VMT per capita, which is far below the threshold of 8.9 VMT identified in the guidelines.

As the VMT per capita for the parcel is lower than the regional threshold of 8.9 VMT, the Project can be screened out, therefore it will not conflict or be inconsistent with CEQA Guidelines 15064.3. There is **no impact.**

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

Less Than Significant Impact. The proposed Project has been designed for ease of access, adequate circulation/movement, and is typical of residential developments in the City of Hanford. On-site circulation patterns do not involve high speeds, sharp curves or dangerous intersections. Although there will be an increase in the volume of vehicles accessing the site and surrounding areas, the proposed Project will not present a substantial increase in hazards. Any impacts are considered ***less than significant.***

Mitigation Measures: None are required.

d) Result in inadequate emergency access?

Less Than Significant Impact. The proposed Project does not involve a change to any emergency response plan. The site will remain accessible to emergency vehicles of all sizes. As such, potential impacts are ***less than significant.***

Mitigation Measures: None are required.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. 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:				
i. 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), or	☐	☐	☒	☐
ii. 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 the Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

RESPONSES

a) 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:

   i) 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), or

   ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less Than Significant Impact. In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, potentially affected Tribes were formally notified of this Project and were given the opportunity to request consultation on the Project. The City contacted the Native American Heritage Commission, requesting a contact list of applicable Native American Tribes, which was provided to the City. The City provided letters to the listed Tribes on November 22, 2023, notifying them of the Project and requesting consultation, if desired.

A Cultural Resources Assessment was prepared by Taylored Archaeology dated May 2025, Appendix C. As stated in the assessment, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, nor is it listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. As part of the assessment, a records search was completed by the Southern San Joaquin Valley information Center. Based on the results of the records search, no previously recorded tribal cultural resources are located within the Project. Although no historical resources were identified and the presence of remains are not anticipated, cultural resources under the ground surface is possible. The Cultural Resources Assessment included a recommendation for two mitigations previously listed under Cultural Resources, CUL 1 and CUL 2. The City and the Santa Rosa Rancheria Tachi Yokut Tribe have also agreed to an additional mitigation measure that requires the developer/owner to agree to a burial treatment plan prior to any ground disturbing activities, as detailed in CUL-3. Mitigation Measures CUL-1, CUL-2 and CUL 3 will ensure that impacts will be **less than significant with mitigation.**

Mitigation Measures:

CUL – 3

A burial treatment plan shall be entered into by the Project applicant/property owner prior to any ground disturbing activities.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The proposed Project will be required to connect to water, sewer, stormwater and wastewater services provided by the City of Hanford and may be subject to water use fees and/or development fees to be provided such service. In addition, the Project will require solid waste disposal services.

Water

The City of Hanford's water supply system is a groundwater system. The city is located within the Tulare Lake Hydrologic Region is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 15 groundwater wells, three storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water.

Solid Waste

Solid waste in the city is collected by a private contractor, Kings Waste Recycling Authority (KWRA). Refuse is sorted at the KWRA facility to recover recyclable materials before being hauled to the landfills in Kettleman Hills. For single-family residential customers, the City has instituted a green waste collection mixed recycle collection program.

Wastewater

The City of Hanford wastewater system provides for the treatment, disposal, and reuse of effluent, which meets all of the state's discharge requirements for the city. The wastewater system consists of a treatment plant and 21 sanitary sewer lift stations located throughout the city. The treatment facility has a capacity of 8 million gallons per day and is located south of Houston Avenue and East of 11th Avenue. The City's wastewater system also pursues water conservation strategies to ensure the long-term reuse of treated disinfected wastewater to reduce the need for groundwater.

RESPONSES

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?

Less than Significant Impact. The Project site is located within the service territory of the City of Hanford and is currently designated for residential development in the City of Hanford General Plan. Operational discharge flows treated at the City's wastewater treatment facility would be required to comply with applicable water discharge requirements issued by the Central Valley Regional Water Quality Control Board (RWQCB). Compliance with conditions or permit requirements established by the City as well as water

discharge requirements outlined by the Central Valley RWQCB would ensure that wastewater discharges coming from the proposed Project site and treated by the WWTF system would not exceed applicable Central Valley RWQCB wastewater treatment requirements.

As discussed in Section IX, Hydrology and Water Quality, with an increase in the area of impervious surfaces on the Project site, an increase in the amount of storm water runoff is anticipated. The site will be designed so that storm water is collected and deposited in the existing stormwater basin to the south. Any additional runoff infrastructure will tie into the City's existing storm drain system. The storm water collection system design will be subject to review and approval by the City Public Works Department. Storm water during construction will be managed as part of the Storm Water Pollution Prevention Plan (SWPPP). A copy of the SWPPP is retained on-site during construction.

Additionally, as the site is designated and zoned for residential development, water usage, electricity and natural gas usage and the use of telecommunications facilities has been accounted for is the City's and utility providers long-range planning documents.

Thus, the proposed Project would have a ***less than significant impact.***

Mitigation Measures: None are required.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. Water service would be provided to the Project by the City of Hanford, which relies on groundwater as its sole water supply source. The City is a member of the Kings River East Groundwater Sustainability Agency (KREGSA). The most recent KREGSA GSP Annual Report indicates that groundwater levels at Representative Monitoring Sites near the City are above their designated Minimum Thresholds and on track to meet the forecast groundwater level projections and Interim Milestones established for these wells.[25]

Additionally, the City anticipates that its sources of supplies will be available to meet demands on a consistent basis for all year types throughout the planning horizon of the UWMP, as the site is planned for residential development and has been included in the City's infrastructure planning documentation. The proposed development will be required to follow the City's General Plan and Zoning Ordinances which include land use goals, policies, and implementation measures for developments regarding water

[25] Ibid. Pg 1-3.

use. The Project developer will also be required to pay the City of Hanford's water system impact fees. Funds accrued under this fee are used to make capital improvements to the City's water system, including conservation improvements. Impacts are ***less than significant impact.***

Mitigation Measures: None are required.

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?

Less Than Significant Impact. The proposed Project will result in wastewater from residential units that will be discharged into the City's existing wastewater treatment system. The wastewater will be typical of other residential developments consisting of bathrooms, kitchen drains, and other similar features. The Project will not discharge any unusual or atypical wastewater that would violate the City's waste discharge requirements. Therefore, assuming compliance with applicable standards and payment of required impact fees and connection charges, the Project would not result in a significant impact related to construction or expansions of existing wastewater treatment facilities. The impact of the Project on wastewater treatment is ***less than significant***.

Mitigation Measures: None are required.

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 statutes and regulations related to solid waste?

Less Than Significant Impact. The City of Hanford, provides weekly curbside solid waste collection services to all households, businesses, and industries within City limits. The Project will result in the generation of additional solid waste typical of residential uses. Because the City's existing infrastructure has the capacity to accommodate the solid waste currently planned in the General Plan for expanded population, it can be inferred that the existing solid waste infrastructure has adequate capacity to serve the proposed Project.

The proposed Project conforms to all applicable statues and regulations related to solid waste disposal and will comply with the adopted policies related to solid waste. The Project would not generate solid waste in excess of State or Local Standards and any impacts will be ***less than significant.***

Mitigation Measures: None are required.

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 Incorporation	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?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The City of Hanford's planning area is composed of urbanized portions of land and the surrounding agricultural fields. The Project site has ensured fire protection by the Hanford Fire Department, located at 350 W. Grangeville Boulevard, approximately 2.3 miles northeast of the site. Given the location of the nearest fire station, approximately .8 miles to the southeast, response time is expected to be extremely quick in the rare event of a fire event.

RESPONSES

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?

Less Than Significant Impact. The proposed Project is located in an area developed with rural residential, residential and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

According to the Kings County Multi-Jurisdictional Hazard Mitigation Plan, the City of Hanford is not at high risk for Wildfires and the City is not in a State responsibility area or classified as a Fire Hazard Severity Zone, as shown on the Kings County Federal, State, and Local Responsibility Severity Zones Map for Kings County.

The proposed Project does not require the installation or maintenance of associated infrastructure that would increase wildfire risk or result in impacts to the environment. To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan. As such, any wildfire risk to the project structures or people would be ***less than significant.***

Mitigation Measures: None are required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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?	☐	☐	☒	☐

RESPONSES

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the

number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation. The proposed Project site is currently undeveloped and surrounded by agricultural and residential land uses. The Project includes the development of 211 residential units. As evaluated in this IS/MND, the proposed Project would not 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; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of potential impacts. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share a similar cultural paleontological and biological resources. Consequently, the incremental effects of the proposed Project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the Project would have a ***less than significant impact with mitigation incorporated.***

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)?

Less Than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All Project- related impacts were determined to be either less than significant, or less than significant after mitigation. The proposed Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc.). Due to buildout of the area and existing land constraints, it is not anticipated that further unplanned substantial residential development will occur in the area in the foreseeable future. As such, Project impacts are not considered to be cumulatively considerable given the lack

of proposed new development in the area and the insignificance of Project-induced impacts. The impact is therefore ***less than significant***.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the project may have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated as described in each specific impact area which will reduce all potentially significant impacts to ***less than significant.***

LIST OF PREPARERS

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Padre and Associates

Live Oak Associates

Taylored Archaeology

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C2 Consulting

Persons and Agencies Consulted

City of Hanford

- Gabrielle Myers, City Planner

Appendix A

Air Quality Assessment

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

MEMORANDUM

To: N&M Capital LLC **Project Number**: 2502-1501

From: Robert Vander Weele

Date: 10/8/25

Subject: Construction and Operational Phase Air Quality and Greenhouse Gas Emissions Estimates for the Proposed Millenium Estates Subdivision, Hanford, Kings County, California

Padre Associates, Inc. (Padre) has prepared this Memorandum to document the results of the criteria pollutant and greenhouse gas (GHG) estimates for the construction and operational phase of the Proposed Millenium Estates Subdivision (Project). The Project is located within the City of Hanford, California on assessor's parcel number (APN) 011-010-010 (Project Site). The Project Site consists of approximately 30.90 acres (ac). The nearest sensitive receptors are located within 100 meters (m) of the Project Site (refer to Plate 1 in the attachments). These receptors consist of two single family residences located within agricultural areas (Residential Receptor-1 and Residential Receptor-2).

Proposed Project

The proposed Project consists of the construction of a residential neighborhood consisting of 211 single family homes with lot sizes ranging from 3,360 square feet (sf) to 8,808 sf. Open space is estimated to be approximately 0.66 ac. The construction phase of the Project is proposed to take approximately 2.5 years over three phases to complete (refer to Table 1 below for a construction schedule). Phase 1 is estimated to have the most onsite diesel equipment use during the Project.

Table 1. Construction Schedule

Phase	Subphase	Days
Phase 1	Grading	58
	Utilities	66
Phase 2	Vertical Construction	340
	Flatwork and Paving	32
Phase 3	Interior Finishing	105
	Exterior Finishing	60

Emissions Estimate Methods and Assumptions

Emissions modeling was conducted to estimate the criteria pollutant and GHG emissions for the construction and operational phase of the Project. The emissions were estimated using the most recent emission factors and load factors obtained from the California Emissions Estimator Model® (CalEEMod) User's Guide, Emission Factors (EMFAC) model, the South Coast Air Quality Management District (SCAQMD) and U.S. Environmental Protection Agency (U.S. EPA)

Emissions Estimate Results Summary

Based on this construction schedule criteria pollutant emissions for the construction phase of the Project were estimated to be well below the San Joaquin Valley Air Pollution Control District's (SJVAPCD) significance thresholds (refer to Table 2 below). The primary sources of PM_{10} and $PM_{2.5}$ emissions were fugitive dust from grading activities and vehicles traveling on paved roads (Refer to Table 3 below). The maximum diesel particulate matter (DPM) emissions from the use of onsite diesel-powered equipment were estimated to be approximately 0.0061 tons per year for the first year (refer to Table 3 below). Emissions estimate tables are provided as an attachment.

Table 2. Estimated Construction Criteria Pollutant Emissions

Phase	Units	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2
Phase 1	Tons/year	0.513	0.054	0.893	0.156	2.100	0.006
Phase 2	Tons/year	0.605	0.039	0.624	0.128	1.033	0.006
Phase 3	Tons/year	0.098	0.010	0.062	0.017	0.393	0.001
SJVAPCD Significance Threshold (tons/year)		**10**	**10**	**10**	**15**	**100**	**27**
Exceeds Thresholds?		**No**	**No**	**No**	**No**	**No**	**No**

Table 3. Estimated Construction Particulate Emissions

Phase	Units	$PM_{10}E$	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$	$PM_{2.5}D$	$PM_{2.5}T$
Phase 1	Tons/year	0.008	0.885	0.893	0.008	0.148	0.156
Phase 2	Tons/year	0.007	0.617	0.624	0.007	0.121	0.128
Phase 3	Tons/year	0.001	0.061	0.062	0.001	0.015	0.017
Max Total DPM Emissions from Onsite Equipment, tons per year*						0.0061	

Notes: * - Mobile emissions emitted at offsite locations are not included in this DPM total.
Suffixes E = Exhaust, D= Dust, and T = Total.

The estimated maximum annual DPM construction emissions noted above are based on all construction activities anticipated to occur within the Project site during the first year of the Project. Padre has also estimated the yearly DPM emissions generated within the portion of the Project site that falls within the 100 m radius, 250 m radius and 500 m radius, the two nearest residential receptors (refer to Table 4 and 5 below).

Table 4. Estimated Onsite DPM Emissions within a Defined Radius of Sensitive Receptor 1

Sensitive Receptor 1	Radius from Sensitive Receptor (m)		
	0 to 100	0 to 250	0 to 500
Project Year - 1, tons per year	0.0004	0.0018	0.0057
Project Year - 2, tons per year	0.0002	0.0007	0.0021
Project Year - 3, tons per year	0.0001	0.0002	0.0007

Table 5. Estimated Onsite DPM Emissions within a Defined Radius of Sensitive Receptor 2

Sensitive Receptor 2	Radius from Sensitive Receptor (m)		
	0 to 100	0 to 250	0 to 500
Project Year - 1, tons per year	0.0008	0.0043	0.0061
Project Year - 2, tons per year	0.0003	0.0016	0.0022
Project Year - 3, tons per year	0.0001	0.0005	0.0008

The total construction GHG emissions for the Project were estimated to be approximately 1,157 metric tons of carbon dioxide equivalent ($MTCO_2E$). The yearly GHG emissions are summarized in Table 6 below.

Table 6. Estimated Construction Related Greenhouse Gas Emissions

Phase	Unit	N_2O	CH_4	CO_2	$MTCO_2E$/year
Phase 1	Tons/year	0.031	0.106	561	519
Phase 2	Tons/year	0.067	0.030	585	548
Phase 3	Tons/year	0.006	0.005	97.4	89.9

Construction Phase – Information and Assumptions

- All construction equipment type, horsepower, hourly use, and daily use were provided by N&M Capital LLC (N&M) or estimated by Padre.
- All construction equipment was assumed to be EPA Tier 4 compliant.
- Equipment, supplies, fueling, personnel, and import and export vehicle trips were provided by N&M or estimated by Padre.
- Site grading, loading/dumping, and import/export volumes were provided by N&M.

Detailed source information is provided in the attachments.

Operational Emissions Estimate Results Summary

Criteria pollutant emissions for the Project operational activities were estimated to be below the SJVAPCD significance thresholds (refer to Table 7 below). Mobile emissions were estimated to be the primary source of criteria pollutant emissions. The primary source of PM_{10}

and $PM_{2.5}$ emissions were from fugitive dust from vehicles traveling on paved roads (Refer to Table 8 below). DPM from the use of onsite diesel-powered equipment was estimated to be approximately 0.0005 tons per year (refer to Table 8 below).

Table 7. Estimated Operational Criteria Pollutant Emissions

Phase	Units	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2
Operations Phase without Resident Vehicle Emissions	Tons/year	0.044	0.102	0.003	0.001	5.14	0.0003
Operations Phase Resident Vehicle Emissions	Tons/year	0.284	0.051	3.66	0.928	4.80	0.022
Total Operations Emissions	**Tons/Year**	**0.33**	**0.153**	**3.66**	**0.929**	**9.94**	**0.023**
SJVAPCD Significance Threshold (tons/year)		**10**	**10**	**15**	**15**	**100**	**27**
Exceed Thresholds?		**No**	**No**	**No**	**No**	**No**	**No**

Notes: Total emissions numbers may not add up due to rounding.

Table 8. Estimated Operational Particulate and DPM Emissions

Phase	Units	$PM_{10}E$	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$	$PM_{2.5}D$	$PM_{2.5}T$
Operations Phase without Resident Vehicle Emissions	Tons/year	0.0005	0.002	0.003	0.0004	0.0005	0.001
Operations Phase Resident Vehicle Emissions	Tons/year	0.005	3.66	3.66	0.011	0.917	0.928
Total Operations Emissions	**Tons/Year**	**0.005**	**3.66**	**3.66**	**0.011**	**0.918**	**0.929**
DPM Emissions from Onsite Diesel Sources, tons per year*						0.0005	

Notes: * - Mobile emissions emitted at offsite locations are not included in this DPM total.
Suffixes E = Exhaust, D= Dust, and T = Total.
Total emissions numbers may not add up due to rounding.

Total GHG operational phase plus amortized construction phase emissions for the Project were estimated to be approximately 2,306 $MTCO_2E$/year (refer to Table 9 below). Mobile emissions were estimated to be the primary source of GHG emissions.

Table 9. Estimated Operational Greenhouse Gas Emissions

Phase	Unit	N_2O	CH_4	CO_2	$MTCO_2E$/year
Operations Phase without Customer Vehicle* Emissions	Tons/year	0.005	0.140	209	194
Operations Phase Customer Vehicle Emissions	Tons/year	0.072	0.012	2,265	2,073
Total Operations Emissions	**Tons**	**0.077**	**0.152**	**2,474**	**2,267**
Total Operational Phase Plus Amortized Construction Phase Emissions MTCO2E/year*					**2,306**

Notes: * - Construction GHG emissions were amortized over 30 years.
Total emissions numbers may not add up due to rounding.

Operational Phase – Information and Assumptions

- Operations are assumed to take place 7 days per week.
- Customer vehicle emissions were estimated the draft *Traffic Evaluation for the Millenium Estates Project* dated May 2025 provided by C2 Consult Corp (C2) of Denver, Colorado.
- Daily new trips were assumed to be from the Hanford area on 10-mile (mi) round trips.

Detailed source information is provided in the attachments.

Health Risk Prioritization Screening

Using the Project construction and operational emissions estimates discussed above, Padre completed a health risk prioritization screening of the Project's construction and operational phase DPM emissions using the SJVAPCD's Prioritization Calculator. The Prioritization Calculator utilizes toxic substance profiles based on Assembly Bill (AB) 2588 Hotspots Air Toxic Profiles (SJVAPCD, 2023a) and project emissions to calculate a prioritization score between 0 and 100 for cancer risk, acute toxicity risk, and chronic toxicity risk. In accordance with the Air Toxics Hot Spots Program, Facility Prioritization Guidelines (CAPCOA, 1990 and 2016) and APR- 1906 Framework for Performing Health Risk Assessments (SJVAPCD, 2015) a facility or project with a prioritization score between 0 and less than 10 would not be required to perform a Health Risk Assessments (HRA) and would have a less than significant impact.

The nearest sensitive receptors to the Project Site consist of two single-family residential homes on adjacent properties (Residential Receptor-1 and Residential Receptor-2) within 0 to 100 m to the north and east of the Project Site, respectively (refer to Plate 1). The prioritization screening evaluated the impacts to receptors for the estimated onsite Project DPM emissions associated with the construction phase (refer to Tables 3 through 5 above) and onsite DPM emissions associated with the operational phase (refer to Table 8 above).

The results of the prioritization screening, using the maximum total yearly onsite DPM emissions, indicate that the Project's maximum prioritization score for the construction phase was 28.18 for the Residential Receptor-1 and Residential Receptor-2 (within a 0 to 100 m radius of the Project). However, because DPM emissions from construction activities are dispersed throughout the site rather than originating from a single point, it is more representative to use the emissions generated within 0 to 100 m of the nearest sensitive receptors. Therefore, Padre estimated the DPM emissions generated within the portion of the Project site that falls within the 0 to 100 m radius of the two nearest sensitive receptors (refer to Tables 4 and 5 above and Plate 1). Using these estimated DPM emissions the maximum prioritization scores for the construction phase was 1.85 for the Sensitive Receptor – 1 and 3.70 for Sensitive Receptor – 2.

The results of the prioritization screening, using maximum total yearly onsite operational DPM emissions, indicate that the Project's maximum prioritization score for the operational phase is 2.31. The tables below summarize the maximum prioritization scores related to total DPM emissions generated for all three years of construction, maximum prioritization scores related to construction DPM emissions generated within 0 to 100 m of the two nearest sensitive receptors during the first year of construction and the prioritization scores related to DPM emissions generated during the operational phase of the Project.

Table 10. Prioritization Screening - Total Onsite DPM Emissions

Receptor Proximity (m)	Construction Year 1	Construction Year 2	Construction Year 3	Operational Only
0 to 100	28.18	10.16	4.62	2.31

Table 11. Prioritization Screening - Onsite DPM Emissions Generated within 0-100 Meters of Residential Receptor 1

Receptor Proximity (m)	Construction Year 1
0 to 100	1.85

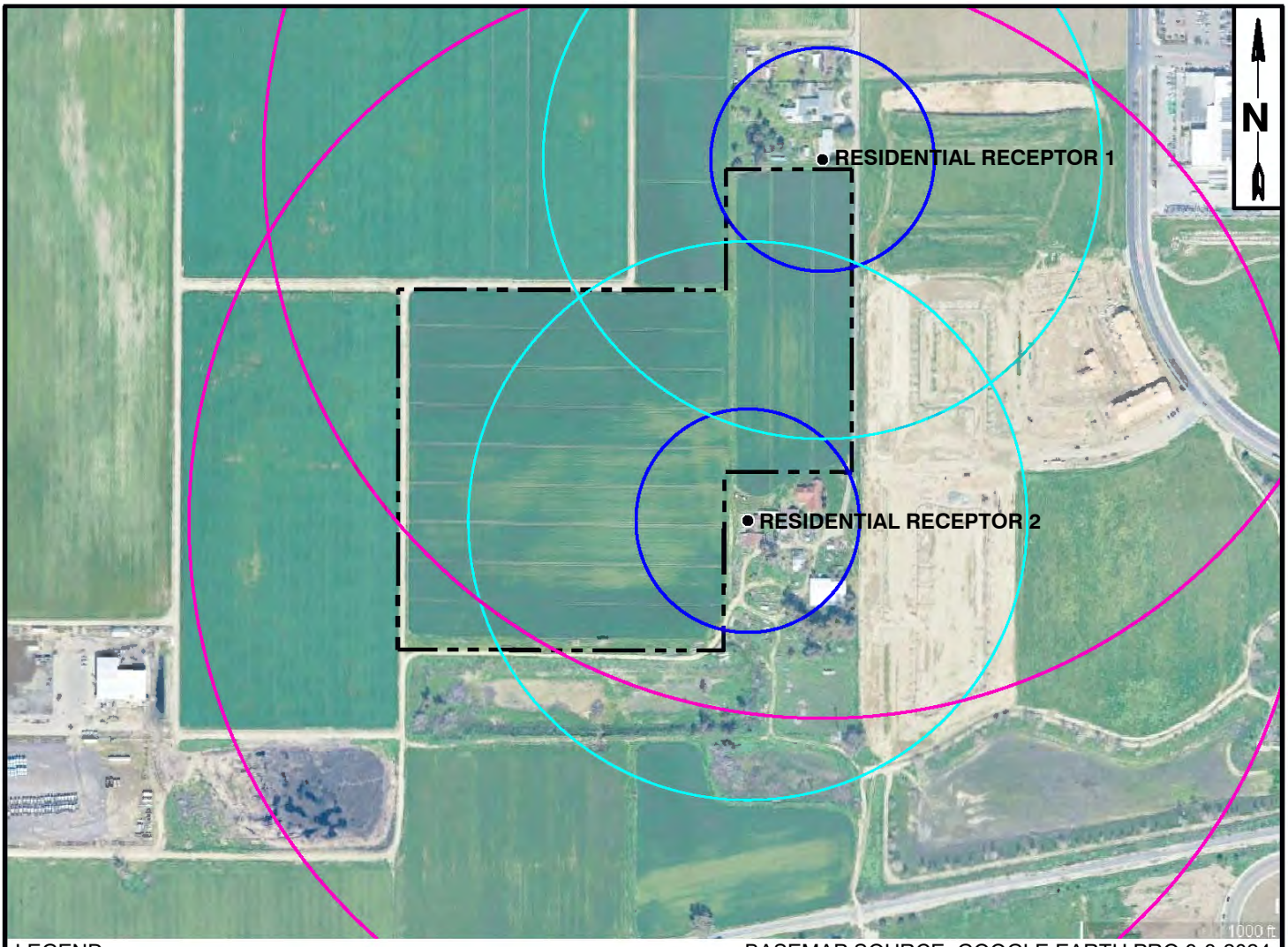
Table 12. Prioritization Screening - Onsite DPM Emissions Generated within 0-100 Meters of Residential Receptor 2

Receptor Proximity (m)	Construction Year 1
0 to 100	3.70

None of the prioritization scores indicated for DPM emissions generated within 0 to 100 m of Residential Receptor-1 or Residential Receptor-1 exceed 10 therefore an HRA would not be required by the SJVAPCD. A copy of the prioritization screening calculations is provided in the attachments.

Attachments: Plate 1
Air Quality and Greenhouse Gas Emissions Model Output
Prioritization Screening Calculations

Plate 1



LEGEND

PROPERTY BOUUNDARY

100 METER RADIUS

250 METER RADIUS

500 METER RADIUS

BASEMAP SOURCE: GOOGLE EARTH PRO 3-3-2024

RADIUS IN METERS	AREA IN SQUARE FEET	
RADIUS	RESIDENTIAL RECEPTOR 1	RESIDENTIAL RECEPTOR 2
100 METER RADIUS	96,960 S.F.	175,474 S.F.
250 METER RADIUS	394,933 S.F.	957,573 S.F.
500 METER RADIUS	1,268,659 S.F.	1,343,640 S.F.

0 500 1,000

SCALE IN FEET

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
Emissions Study
Millenium Estates Subdivision Project
Hanford
Kings County, CA

PROJECT NUMBER: 2502-1501

DATE: June 2025

EMISSIONS STUDY

PLATE 1

Z:\Current Projects\2502-1501 - Millenium Estates AQ-GHG Estimates - MF\Graphics\Millenium Estates.dwg, 6/3/2025 11:47:13 AM

Air Quality and Greenhouse Gas Emissions Model Output

MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS **Model Run:** June 5, 2025
TABLE 1: CONSTRUCTION EMISSIONS SUMMARY

Source	Days*	Peak Day Emissions, lbs/day													Project Emissions, tons												$MTCO_2e$
		NO_x	ROG	$PM_{10}E$**	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$**	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	$PM_{10}E$**	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$**	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	
Grading	58	4.35	0.866	0.130	11.4	11.5	0.129	1.23	1.36	34.3	0.082	0.236	2.170	7,879	0.106	0.024	0.003	0.321	0.324	0.003	0.050	0.053	0.960	0.002	0.003	0.061	197.6	181.5
Utilities	66	6.73	0.684	0.136	6.5	6.7	0.134	0.95	1.08	29.2	0.090	0.652	1.320	8,939	0.133	0.018	0.003	0.180	0.183	0.003	0.030	0.032	0.790	0.002	0.005	0.037	164.2	151.2
Vertical Construction	340	3.96	0.146	0.037	5.1	5.1	0.036	0.76	0.79	4.41	0.033	0.424	0.102	3,328	0.581	0.024	0.004	0.818	0.823	0.004	0.147	0.151	0.745	0.004	0.050	0.017	423	397
Flatwork and Paving	32	22.71	1.90	0.453	12.46	12.91	0.436	2.85	3.28	27.4	0.301	4.251	1.350	31,292	0.205	0.018	0.004	0.124	0.128	0.004	0.028	0.032	0.328	0.003	0.035	0.017	277	260
Interior Finishing	105	3.88	0.275	0.054	2.06	2.12	0.053	0.525	0.578	10.54	0.040	0.364	0.128	3,938	0.128	0.012	0.0016	0.083	0.085	0.002	0.021	0.023	0.434	0.0012	0.008	0.005	118.1	109.2
Exterior Finishing	60	2.85	0.228	0.047	1.68	1.73	0.046	0.428	0.474	9.01	0.034	0.315	0.107	3,395	0.061	0.007	0.0009	0.037	0.038	0.0009	0.009	0.010	0.269	0.0007	0.003	0.003	63.7	58.7
Peak Day Emissions, lb/day		***22.7***	***1.90***	***0.453***	***12.5***	***12.9***	***0.44***	***2.85***	***3.28***	***34.3***	***0.301***	***4.25***	***2.17***	***31,292***	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Project Year -1 Emissions, tons															***0.513***	***0.054***	***0.008***	***0.885***	***0.893***	***0.008***	***0.148***	***0.156***	***2.100***	***0.006***	***0.031***	***0.106***	***561***	***519***
Project Year -2 Emissions, tons															***0.605***	***0.039***	***0.007***	***0.617***	***0.624***	***0.007***	***0.121***	***0.128***	***1.033***	***0.006***	***0.067***	***0.030***	***585***	***548***
Project Year -3 Emissions, tons															***0.098***	***0.010***	***0.001***	***0.061***	***0.062***	***0.001***	***0.015***	***0.017***	***0.393***	***0.001***	***0.006***	***0.005***	***97.4***	***89.9***
SJVAPCD Significance Thresholds															***10***	***10***	--	--	***15***	--	--	***15***	***100***	***27***	--	--	--	--
Threshold exceeded?															***No***	***No***	--	--	***No***	--	--	***No***	***No***	***No***	--	--	--	--
Total Project Emissions, tons															***1.21***	***0.103***	***0.017***	***1.56***	***1.58***	***0.016***	***0.284***	***0.301***	***3.53***	***0.013***	***0.104***	***0.141***	***1,243***	***1,157***
Project Year -1 DPM Emissions From Onsite Equipment, tons															***0.0061***	--	--	--	--	--	--	--	--	--	--	--	--	--
Project Year -2 DPM Emissions From Onsite Equipment, tons															***0.0022***	--	--	--	--	--	--	--	--	--	--	--	--	--
Project Year -3 DPM Emissions From Onsite Equipment, tons															***0.0008***	--	--	--	--	--	--	--	--	--	--	--	--	--
Total DPM Emissions From Onsite Equipment, tons															***0.0091***	--	--	--	--	--	--	--	--	--	--	--	--	--
GHG - MTCO2E conversions																									***273***	***27.9***	***1***	--
Total Construction Phase MTCO2E/yr																									***1,157***			

Notes:
Global Warming Potentials (273 for N_2O, 27.9 for CH_4, and 1 for CO_2, Table 7.SM.6, Intergovernmental Panel on Climate Change (IPCC). 2021. Sixth Assessment Report

SJVAPCD - San Joaquin Valley Air Pollution Control District
$MTCO_2e$ - Metric Tons of Carbon Dioxide Equivalent
NO_x - Oxides of Nitrogen
ROG - Reactive Organic Gases
$PM_{2.5}$ - Particulate Matter 2.5 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.
PM_{10} - Particulate Matter 10 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.
DPM - Diesel Particulate Matter
CO - Carbon Monoxide
SO_2 - Sulfur Dioxide
N_2O - Nitrous Oxide
CH_4 - Methane
CO_2 - Carbon Dioxide
* - Two and a half years of construction.
** - Includes emissions from onroad vehicles operating offsite and away from adjacent sensitive receptors.

Estimated Onsite DPM Emissions within a Defined Radius of the Two Nearest Sensitive Receptors			
Sensitive Receptor 1	**Radius from Sensitive Receptor, meters**		
	0 to 100	**0 to 250**	**0 to 500**
Project Year -1 DPM Emissions From Onsite Equipment, tons	0.0004	0.0018	0.0057
Project Year -2 DPM Emissions From Onsite Equipment, tons	0.0002	0.0007	0.0021
Project Year -3 DPM Emissions From Onsite Equipment, tons	0.0001	0.0002	0.0007

Sensitive Receptor 2	**Radius from Sensitive Receptor, meters**		
	0 to 100	**0 to 250**	**0 to 500**
Project Year -1 DPM Emissions From Onsite Equipment, tons	0.0008	0.0043	0.0061
Project Year -2 DPM Emissions From Onsite Equipment, tons	0.0003	0.0016	0.0022
Project Year -3 DPM Emissions From Onsite Equipment, tons	0.0001	0.0005	0.0008

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MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 2: Grading

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.000	0	--	2.600	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Architectural Coating	--	--	1	0.000	0	--	50.000	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Backhoe	125	37	1	8	35	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.212	0.049	0.007	0.007	3.018	0.004	0.003	0.1240	383	0.004	0.001	0.000	0.000	0.053	0.000	0.000	0.002	6.73
Crane	250	29	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-2	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Dozer	200	43	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Excavator	160	38	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	25	74	1	0	0	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-2	25	74	1	0	0	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Grader	150	41	1	8	58	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.282	0.065	0.009	0.009	4.013	0.005	0.005	0.1681	519	0.008	0.002	0.000	0.000	0.116	0.000	0.000	0.005	15.05
Lift-1	50	20	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Lift-2	50	20	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-1	250	36	1	8	58	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.413	0.095	0.013	0.013	3.492	0.008	0.007	0.2413	746	0.012	0.003	0.000	0.000	0.101	0.000	0.000	0.007	21.63
Loader-2	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Machine	100	42	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Equipment	100	36	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Roller	50	38	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-1	475	48	1	8	58	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	1.046	0.241	0.032	0.032	8.847	0.020	0.017	0.6112	1896	0.030	0.007	0.001	0.001	0.257	0.001	0.000	0.018	54.98
Scraper-2	475	48	1	8	58	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	1.046	0.241	0.032	0.032	8.847	0.020	0.017	0.6112	1896	0.030	0.007	0.001	0.001	0.257	0.001	0.000	0.018	54.98
Water Truck-1	400	38	1	8	58	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.697	0.161	0.021	0.021	5.898	0.013	0.011	0.4128	1274	0.020	0.005	0.001	0.001	0.171	0.000	0.000	0.012	36.95
														Total	**3.695**	**0.85**	**0.11**	**0.114**	**34.114**	**0.071**	**0.060**	**2.169**	**6713**	**0.105**	**0.024**	**0.0032**	**0.003**	**0.955**	**0.002**	**0.002**	**0.061**	**190.30**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	2	50	58	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.006	0.001	0.000	0.000	0.122	0.001	0.001	0.000	51.5	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	1.493
Light-Duty Truck - LDT2 (offsite)	Personnel	1	5	50	58	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.024	0.005	0.003	0.003	0.049	0.001	0.024	0.000	151.0	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	4.379
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	24	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.386
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	4	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.311
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	5	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.512	0.006	0.011	0.010	0.024	0.007	0.122	0.000	776.5	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.776
														Total	**0.65**	**0.01**	**0.02**	**0.02**	**0.20**	**0.011**	**0.176**	**0.001**	**1166**	**0.002**	**0.000**	**0.000**	**0.000**	**0.005**	**0.000**	**0.001**	**0.000**	**7.35**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	Personnel	1	2	50	58	0.4263	0.1069	0.082237	0.020630	0.002385	0.000598
Light-Duty Truck - LDT2 (offsite)	Personnel	1	5	50	58	0.4272	0.1073	0.247222	0.062068	0.007169	0.001800
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	24	0.4642	0.1202	0.015352	0.003976	0.000184	0.000048
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	4	0.4923	0.1300	0.054267	0.014334	0.000109	0.000029
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	5	50	2	0.4923	0.1300	0.271334	0.071672	0.000271	0.000072
							Total	**0.670412**	**0.172679**	**0.010118**	**0.002546**

Notes:

Hours per day and durations estimated and approved by client.

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for fuel deliveries from Hanford area (approximatley 15-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

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CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 3: Phase

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.000	0	--	2.600	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Architectural Coating	--	--	1	0.000	0	--	50.000	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Backhoe	125	37	1	8	33	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.212	0.049	0.007	0.007	3.018	0.004	0.003	0.1240	383	0.003	0.001	0.000	0.000	0.050	0.000	0.000	0.002	6.32
Crane	250	29	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	8	66	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.007	0.002	0.000	0.000	0.103	0.000	0.000	0.001	15.88
Compressor-2	100	48	1	8	33	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.004	0.001	0.000	0.000	0.052	0.000	0.000	0.000	7.94
Dozer	200	43	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Excavator	160	38	1	8	66	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.279	0.064	0.009	0.009	3.968	0.005	0.005	0.1641	507	0.009	0.002	0.000	0.000	0.131	0.000	0.000	0.005	16.72
Generator-1	25	74	1	8	66	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.030	0.001	0.000	0.000	0.044	0.000	0.000	0.001	6.12
Generator-2	25	74	1	0	0	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Grader	150	41	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Lift-1	50	20	1	8	66	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.016	0.001	0.000	0.000	0.022	0.000	0.000	0.001	3.06
Lift-2	50	20	1	8	33	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.008	0.000	0.000	0.000	0.011	0.000	0.000	0.000	1.53
Loader-1	250	36	1	8	66	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.413	0.095	0.013	0.013	3.492	0.008	0.007	0.2413	746	0.014	0.003	0.000	0.000	0.115	0.000	0.000	0.008	24.61
Loader-2	250	36	1	8	33	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.413	0.095	0.013	0.013	3.492	0.008	0.007	0.2413	746	0.007	0.002	0.000	0.000	0.058	0.000	0.000	0.004	12.30
Paving Machine	100	42	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Equipment	100	36	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Roller	50	38	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-1	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-2	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Truck-1	400	38	1	8	66	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.697	0.161	0.021	0.021	5.898	0.013	0.011	0.4128	1274	0.023	0.005	0.001	0.001	0.195	0.000	0.000	0.014	42.04
														Total	**4.317**	**0.65**	**0.08**	**0.081**	**28.775**	**0.053**	**0.042**	**1.318**	**4988**	**0.121**	**0.018**	**0.0022**	**0.002**	**0.780**	**0.001**	**0.001**	**0.037**	**136.51**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	3	50	66	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.011	0.002	0.000	0.000	0.208	0.001	0.001	0.001	88.3	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	2.913
Light-Duty Truck - LDT2 (offsite)	Personnel	1	9	50	66	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.041	0.009	0.005	0.004	0.084	0.002	0.041	0.000	258.9	0.001	0.000	0.000	0.000	0.003	0.000	0.001	0.000	8.543
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	13	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.209
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	12	50	15	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	1.228	0.013	0.026	0.025	0.058	0.018	0.294	0.001	1863.6	0.009	0.000	0.000	0.000	0.000	0.000	0.002	0.000	13.977
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	7	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.544
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	10	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	1.024	0.011	0.022	0.021	0.049	0.015	0.245	0.001	1553.0	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.553
														Total	**2.41**	**0.04**	**0.06**	**0.05**	**0.40**	**0.037**	**0.610**	**0.002**	**3951**	**0.012**	**0.000**	**0.000**	**0.000**	**0.010**	**0.000**	**0.004**	**0.000**	**27.74**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	Personnel	1	3	50	66	0.4263	0.1069	0.140977	0.035364997	0.004652	0.001167
Light-Duty Truck - LDT2 (offsite)	Personnel	1	9	50	66	0.4272	0.1073	0.423810	0.106402329	0.013986	0.003511
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	13	0.4642	0.1202	0.015352	0.003975573	0.000100	0.000026
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	12	50	15	0.4923	0.1300	0.651201	0.172012365	0.004884	0.001290
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	7	0.4923	0.1300	0.054267	0.014334364	0.000190	0.000050
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	10	50	2	0.4923	0.1300	0.542668	0.143343638	0.000543	0.000143
							Total	**1.828275**	**0.475433**	**0.024354**	**0.006188**

Notes:

Hours per day and durations estimated and approved by client.

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

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TABLE 4: Vertical Construction

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.000	0	--	2.600	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Architectural Coating	--	--	1	0.000	0	--	50.0	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Backhoe	125	37	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Crane	250	29	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-2	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Dozer	200	43	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Excavator	160	38	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Generator-1	25	74	1	8	340	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.153	0.007	0.000	0.000	0.227	0.000	0.000	0.003	31.522
Generator-2	25	74	1	8	340	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.153	0.007	0.000	0.000	0.227	0.000	0.000	0.003	31.522
Grader	150	41	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Lift-1	50	20	1	8	340	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.082	0.004	0.000	0.000	0.111	0.000	0.000	0.005	15.755
Lift-2	50	20	1	8	340	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.082	0.004	0.000	0.000	0.111	0.000	0.000	0.005	15.76
Loader-1	250	36	1	0	340	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Loader-2	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Machine	100	42	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Equipment	100	36	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Paving Roller	50	38	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Scraper-1	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Scraper-2	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Water Truck-1	400	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
														Total	**2.761**	**0.12**	**0.01**	**0.008**	**3.981**	**0.006**	**0.004**	**0.100**	**556**	**0.469**	**0.021**	**0.001**	**0.001**	**0.677**	**0.001**	**0.001**	**0.017**	**94.56**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	4	50	340	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.014	0.002	0.000	0.000	0.278	0.001	0.002	0.001	118	0.002	0.000	0.000	0.000	0.047	0.000	0.000	0.000	20.0
Light-Duty Truck - LDT2 (offsite)	Personnel	1	9	50	340	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.041	0.009	0.005	0.004	0.084	0.002	0.041	0.000	259	0.007	0.001	0.001	0.001	0.014	0.000	0.007	0.000	44.0
Med-Heavy Duty - T6 Utility (offsite)	Contractors	1	9	50	340	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.216	0.004	0.004	0.004	0.021	0.009	0.152	0.000	965	0.037	0.001	0.001	0.001	0.004	0.002	0.026	0.000	164.1
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	68	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.09
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	4	50	310	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.409	0.004	0.009	0.008	0.019	0.006	0.098	0.000	621	0.063	0.001	0.001	0.001	0.003	0.001	0.015	0.000	96.3
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	34	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.64
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.409	0.004	0.009	0.008	0.019	0.006	0.098	0.000	621	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.621
														Total	**1.20**	**0.03**	**0.03**	**0.03**	**0.43**	**0.026**	**0.420**	**0.002**	**2772**	**0.112**	**0.003**	**0.003**	**0.003**	**0.068**	**0.003**	**0.049**	**0.000**	**328.72**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	Personnel	1	4	50	340	0.4263	0.1069	0.187970	0.047153329	0.031955	0.008016
Light-Duty Truck - LDT2 (offsite)	Personnel	1	9	50	340	0.4272	0.1073	0.423810	0.106402329	0.072048	0.018088
Med-Heavy Duty - T6 Utility (offsite)	Contractors	1	9	50	340	0.4642	0.1202	0.460567	0.119267204	0.078296	0.020275
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	68	0.4642	0.1202	0.015352	0.003975573	0.000522	0.000135
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	4	50	310	0.4923	0.1300	0.217067	0.057337455	0.033645	0.008887
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	34	0.4923	0.1300	0.054267	0.014334364	0.000923	0.000244
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.4923	0.1300	0.217067	0.057337455	0.000217	0.000057
							Total	**1.576099**	**0.405808**	**0.217606**	**0.055703**

Notes:

Hours per day and durations estimated and approved by client.

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for fuel deliveries from Hanford area (approximatley 15-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

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CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 5: Flatwork and Paving

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.413	16	--	2.600	--	--	--	--	--	--	--	--	1.0725	--	--	--	--	--	--	--	--	0.009	--	--	--	--	--	--	--
Architectural Coating	--	--	0	0.000	0	--	50.000	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Backhoe	125	37	1	6	32	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.159	0.037	0.005	0.005	2.264	0.003	0.003	0.0930	287	0.003	0.001	0.000	0.000	0.036	0.000	0.000	0.001	4.59
Crane	250	29	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-2	100	48	1	0	0	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Dozer	200	43	1	6	16	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.296	0.068	0.009	0.009	2.503	0.006	0.005	0.1740	539	0.002	0.001	0.000	0.000	0.020	0.000	0.000	0.001	4.31
Excavator	160	38	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	25	74	1	8	32	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.014	0.001	0.000	0.000	0.021	0.000	0.000	0.000	2.97
Generator-2	25	74	1	0	0	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Grader	150	41	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Lift-1	50	20	1	6	32	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.362	0.016	0.001	0.001	0.489	0.001	0.001	0.0225	69.5	0.006	0.000	0.000	0.000	0.008	0.000	0.000	0.000	1.11
Lift-2	50	20	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-1	250	36	1	8	32	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.413	0.095	0.013	0.013	3.492	0.008	0.007	0.2413	746	0.007	0.002	0.000	0.000	0.056	0.000	0.000	0.004	11.93
Loader-2	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Machine	100	42	2	8	16	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.385	0.089	0.012	0.012	5.482	0.007	0.006	0.2252	697	0.003	0.001	0.000	0.000	0.044	0.000	0.000	0.002	5.57
Paving Equipment	100	36	1	8	16	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.165	0.038	0.005	0.005	2.349	0.003	0.003	0.0971	300	0.001	0.000	0.000	0.000	0.019	0.000	0.000	0.001	2.40
Paving Roller	50	38	2	8	16	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	1.836	0.080	0.005	0.005	2.480	0.003	0.003	0.0536	381	0.015	0.001	0.000	0.000	0.020	0.000	0.000	0.000	3.05
Scraper-1	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-2	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Truck-1	400	38	1	8	32	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.697	0.161	0.021	0.021	5.898	0.013	0.011	0.4128	1274	0.011	0.003	0.000	0.000	0.094	0.000	0.000	0.007	20.38
														Total	**5.211**	**1.70**	**0.07**	**0.074**	**26.294**	**0.047**	**0.039**	**1.340**	**4479**	**0.062**	**0.016**	**0.001**	**0.001**	**0.318**	**0.001**	**0.000**	**0.017**	**56.33**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	1	50	32	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.004	0.001	0.000	0.000	0.069	0.000	0.000	0.000	29.4	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.471
Light-Duty Truck - LDT2 (offsite)	Personnel	1	3	50	32	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.014	0.003	0.002	0.001	0.028	0.001	0.014	0.000	86.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.381
Passenger Vehicle - LDA (offsite)	Paving	1	2	50	16	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.007	0.001	0.000	0.000	0.139	0.001	0.001	0.000	58.9	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.471
Light-Duty Truck - LDT2 (offsite)	Paving	1	5	50	16	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.023	0.005	0.003	0.002	0.046	0.001	0.023	0.000	143.8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.151
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	32	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32.2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.515
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	2	50	5	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.205	0.002	0.004	0.004	0.010	0.003	0.049	0.000	310.6	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.776
Heavy Duty Trucks - T7TC (offsite)	Baserock	1	50	90	20	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	9.213	0.101	0.198	0.189	0.437	0.132	2.202	0.005	13977	0.092	0.001	0.002	0.002	0.004	0.001	0.022	0.000	139.77
Heavy Duty Trucks - T7TC (offsite)	Concrete	1	18	40	10	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	1.474	0.016	0.032	0.030	0.070	0.021	0.352	0.001	2236.3	0.007	0.000	0.000	0.000	0.000	0.000	0.002	0.000	11.181
Heavy Duty Trucks - T7TC (offsite)	Asphalt	1	30	90	15	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	5.528	0.060	0.119	0.113	0.262	0.079	1.321	0.003	8386.1	0.041	0.000	0.001	0.001	0.002	0.001	0.010	0.000	62.895
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	3	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155.3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.233
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	9	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.921	0.010	0.020	0.019	0.044	0.013	0.220	0.000	1397.7	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.398
														Total	**17.50**	**0.20**	**0.38**	**0.36**	**1.11**	**0.254**	**4.212**	**0.010**	**26813**	**0.143**	**0.002**	**0.003**	**0.003**	**0.010**	**0.002**	**0.035**	**0.000**	**220.24**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
~~Passenger Vehicle - LDA (offsite)~~	~~Personnel~~	~~1~~	~~1~~	~~50~~	~~32~~	~~0.4263~~	~~0.1069~~	~~0.046992~~	~~0.011788332~~	~~0.000752~~	~~0.000189~~
~~Light-Duty Truck - LDT2 (offsite)~~	~~Personnel~~	~~1~~	~~3~~	~~50~~	~~32~~	~~0.4272~~	~~0.1073~~	~~0.141270~~	~~0.035467443~~	~~0.002260~~	~~0.000567~~
~~Passenger Vehicle - LDA (offsite)~~	~~Paving~~	~~1~~	~~2~~	~~50~~	~~16~~	~~0.4263~~	~~0.1069~~	~~0.093985~~	~~0.023576664~~	~~0.000752~~	~~0.000189~~
~~Light-Duty Truck - LDT2 (offsite)~~	~~Paving~~	~~1~~	~~5~~	~~50~~	~~16~~	~~0.4272~~	~~0.1073~~	~~0.235450~~	~~0.059112405~~	~~0.001884~~	~~0.000473~~
~~Med-Heavy Duty - T6 Utility (offsite)~~	~~Fueling~~	~~1~~	~~1~~	~~15~~	~~32~~	~~0.4642~~	~~0.1202~~	~~0.015352~~	~~0.003975573~~	~~0.000246~~	~~0.000064~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Supplies~~	~~1~~	~~2~~	~~50~~	~~5~~	~~0.4923~~	~~0.1300~~	~~0.108534~~	~~0.028668728~~	~~0.000271~~	~~0.000072~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Baserock~~	~~1~~	~~50~~	~~90~~	~~20~~	~~0.4923~~	~~0.1300~~	~~4.884011~~	~~1.290092739~~	~~0.048840~~	~~0.012901~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Concrete~~	~~1~~	~~18~~	~~40~~	~~10~~	~~0.4923~~	~~0.1300~~	~~0.781442~~	~~0.206414838~~	~~0.003907~~	~~0.001032~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Asphalt~~	~~1~~	~~30~~	~~90~~	~~15~~	~~0.4923~~	~~0.1300~~	~~2.930407~~	~~0.774055643~~	~~0.021978~~	~~0.005805~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Trash~~	~~1~~	~~1~~	~~50~~	~~3~~	~~0.4923~~	~~0.1300~~	~~0.054267~~	~~0.014334364~~	~~0.000081~~	~~0.000022~~
~~Heavy Duty Trucks - T7TC (offsite)~~	~~Equipment~~	~~1~~	~~9~~	~~50~~	~~2~~	~~0.4923~~	~~0.1300~~	~~0.488401~~	~~0.129009274~~	~~0.000488~~	~~0.000129~~
							~~Total~~	~~**9.780110**~~	~~**2.576496**~~	~~**0.081460**~~	~~**0.021442**~~

Notes:

Hours per day and durations estimated and approved by client.

Round trips for baserock and asphalt delevery estimated from Sanger California (approximatley 90-miles).

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for fuel deliveries from Hanford area (approximatley 15-miles).

Round trips for concrete delevery estimated from Visalia California (approximatley 40-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 6: Interior Finishing

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.000	0	--	2.600	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Architectural Coating	--	--	1	31.7	105	--	50.0	--	--	--	--	--	--	--	--	0.0349	--	--	--	--	--	--	--	--	0.002	--	--	--	--	--	--	--
Backhoe	125	37	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Crane	250	29	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	8	105	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.012	0.003	0.000	0.000	0.164	0.000	0.000	0.001	25.26
Compressor-2	100	48	1	8	53	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.006	0.001	0.000	0.000	0.082	0.000	0.000	0.001	12.63
Dozer	200	43	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Excavator	160	38	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	25	74	1	8	105	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.047	0.002	0.000	0.000	0.070	0.000	0.000	0.001	9.73
Generator-2	25	74	1	8	53	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185.4	0.024	0.001	0.000	0.000	0.035	0.000	0.000	0.001	4.87
Grader	150	41	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Lift-1	50	20	1	8	105	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.025	0.001	0.000	0.000	0.034	0.000	0.000	0.002	4.87
Lift-2	50	20	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-1	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-2	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Machine	100	42	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Equipment	100	36	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Roller	50	38	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-1	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-2	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Truck-1	400	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
														Total	2.718	0.24	0.02	0.020	9.593	0.016	0.011	0.125	1426	0.113	0.010	0.0008	0.001	0.386	0.001	0.000	0.005	57.35

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	10	50	105	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.036	0.006	0.001	0.001	0.695	0.003	0.004	0.002	294	0.002	0.000	0.000	0.000	0.036	0.000	0.000	0.000	15.449
Light-Duty Truck - LDT2 (offsite)	Personnel	1	22	50	105	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.099	0.021	0.011	0.011	0.204	0.006	0.100	0.001	633	0.005	0.001	0.001	0.001	0.011	0.000	0.005	0.000	33.223
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	10	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.161
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	5	50	25	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.512	0.006	0.011	0.010	0.024	0.007	0.122	0.000	776	0.006	0.000	0.000	0.000	0.000	0.000	0.002	0.000	9.706
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	20	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.553
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.409	0.004	0.009	0.008	0.019	0.006	0.098	0.000	621	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.621
														Total	1.17	0.04	0.03	0.03	0.95	0.024	0.354	0.003	2512	0.015	0.002	0.0008	0.0008	0.048	0.001	0.007	0.0001	60.71

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	Personnel	1	10	50	105	0.4263	0.1069	0.469924	0.117883322	0.024671	0.006189
Light-Duty Truck - LDT2 (offsite)	Personnel	1	22	50	105	0.4272	0.1073	1.035980	0.260094581	0.054389	0.013655
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	10	0.4642	0.1202	0.015352	0.003975573	0.000077	0.000020
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	5	50	25	0.4923	0.1300	0.271334	0.071671819	0.003392	0.000896
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	20	0.4923	0.1300	0.054267	0.014334364	0.000543	0.000143
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.4923	0.1300	0.217067	0.057337455	0.000217	0.000057
							Total	2.063924	0.525297	0.083288	0.020960

Notes:

Hours per day and durations estimated and approved by client.

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for fuel deliveries from Hanford area (approximatley 15-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

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MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 7: Exterior Improvements

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day*	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	--	--	1	0.000	0	--	2.600	--	--	--	--	--	--	--	--	0.0000	--	--	--	--	--	--	--	--	0.000	--	--	--	--	--	--	--
Architectural Coating	--	--	1	31.7	60	--	50.0	--	--	--	--	--	--	--	--	0.0349	--	--	--	--	--	--	--	--	0.001	--	--	--	--	--	--	--
Backhoe	125	37	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Crane	250	29	1	0	0	22.000	0.060	0.008	0.008	2.200	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Compressor-1	100	48	1	8	60	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.007	0.002	0.000	0.000	0.094	0.000	0.000	0.001	14.43
Compressor-2	100	48	1	8	60	0.260	0.060	0.008	0.008	3.700	0.006	0.004	0.032	568	0.220	0.051	0.007	0.007	3.132	0.005	0.004	0.0271	481	0.007	0.002	0.000	0.000	0.094	0.000	0.000	0.001	14.43
Dozer	200	43	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.153	474	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Excavator	160	38	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	25	74	1	8	60	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.897	0.039	0.003	0.003	1.338	0.002	0.001	0.0202	185	0.027	0.001	0.000	0.000	0.040	0.000	0.000	0.001	5.56
Generator-2	25	74	1	0	0	2.750	0.120	0.008	0.008	4.100	0.007	0.004	0.062	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Grader	150	41	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.155	478	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Lift-1	50	20	1	8	60	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.483	0.021	0.001	0.001	0.653	0.001	0.001	0.0300	92.7	0.014	0.001	0.000	0.000	0.020	0.000	0.000	0.001	2.78
Lift-2	50	20	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.170	525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-1	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Loader-2	250	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Machine	100	42	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Equipment	100	36	1	0	0	0.260	0.060	0.008	0.008	3.700	0.005	0.004	0.153	473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Paving Roller	50	38	1	0	0	2.740	0.120	0.008	0.008	3.700	0.005	0.004	0.080	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-1	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Scraper-2	475	48	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Truck-1	400	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	475	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
														Total	**1.821**	**0.20**	**0.02**	**0.018**	**8.255**	**0.013**	**0.009**	**0.104**	**1240**	**0.055**	**0.006**	**0.001**	**0.001**	**0.248**	**0.000**	**0.000**	**0.003**	**37.21**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	Personnel	1	8	50	60	0.0324	0.0056	0.0009	0.0009	0.630	0.0026	0.0040	0.002	267	0.029	0.005	0.001	0.001	0.556	0.002	0.004	0.001	235	0.001	0.000	0.000	0.000	0.017	0.000	0.000	0.000	7.062
Light-Duty Truck - LDT2 (offsite)	Personnel	1	17	50	60	0.0409	0.0088	0.0046	0.0044	0.084	0.0025	0.0411	0.000	261	0.077	0.016	0.009	0.008	0.158	0.005	0.077	0.001	489	0.002	0.000	0.000	0.000	0.005	0.000	0.002	0.000	14.670
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	6	0.2178	0.0039	0.0042	0.0040	0.022	0.0092	0.1533	0.000	973	0.007	0.000	0.000	0.000	0.001	0.000	0.005	0.000	32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.097
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	4	50	10	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.409	0.004	0.009	0.008	0.019	0.006	0.098	0.000	621	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.106
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	12	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.102	0.001	0.002	0.002	0.005	0.001	0.024	0.000	155	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.932
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.9287	0.0101	0.0199	0.0191	0.044	0.0133	0.2220	0.000	1409	0.409	0.004	0.009	0.008	0.019	0.006	0.098	0.000	621	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.621
														Total	**1.03**	**0.03**	**0.03**	**0.03**	**0.76**	**0.021**	**0.306**	**0.003**	**2154**	**0.006**	**0.0007**	**0.0003**	**0.0003**	**0.022**	**0.0003**	**0.003**	**0.00007**	**26.49**

On-Road Sources

Source	Trip Type	Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	Personnel	1	8	50	60	0.4263	0.1069	0.375939	0.094306658	0.011278	0.002829
Light-Duty Truck - LDT2 (offsite)	Personnel	1	17	50	60	0.4272	0.1073	0.800530	0.200982177	0.024016	0.006029
Med-Heavy Duty - T6 Utility (offsite)	Fueling	1	1	15	6	0.4642	0.1202	0.015352	0.003975573	0.000046	0.000012
Heavy Duty Trucks - T7TC (offsite)	Supplies	1	4	50	10	0.4923	0.1300	0.217067	0.057337455	0.001085	0.000287
Heavy Duty Trucks - T7TC (offsite)	Trash	1	1	50	12	0.4923	0.1300	0.054267	0.014334364	0.000326	0.000086
Heavy Duty Trucks - T7TC (offsite)	Equipment	1	4	50	2	0.4923	0.1300	0.217067	0.057337455	0.000217	0.000057
							Total	**1.680222**	**0.428274**	**0.036968**	**0.009301**

Notes:

Hours per day and durations estimated and approved by client.

Round trips for fuel deliveries from Hanford area (approximatley 15-miles).

Round trips for supplies deliveries, equipment and trash pickups estimated from within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

Round trips for LDA and LDT2 is estimated from within within Fresno, Kern, Kings, Madera or Tulare counties (approximatley 50-miles).

* Asphalt in acres per day

* Architectural Coating in liters per day

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CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 8: Construction - Fugitive Dust Emissions

Construction

Activity	Source	Source Units	Number of Days	Emission Factor	Emission Factor, Units	Peak Day Emissions (lbs/day)		Total Emissions (tons)	
						PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Grading									
Site Grading	3.0	acres/day	58	0.429	lbs PM10/day/acre	1.2870	0.1170	0.0373	0.0057
Truck Loading & Dumping	0	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	8	vehicle-miles/day	58	1.18	lbs/vehicle-mile	9.4241	0.9424	0.2733	0.0414
					Max/Total	**10.711**	**1.059**	**0.311**	**0.0470**
Utilities									
Site Grading	0.01	acres/day	66	0.429	lbs PM10/day/acre	0.0043	0.0004	0.0001	0.0000
Truck Loading & Dumping	0	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	4.0	vehicle-miles/day	66	1.18	lbs/vehicle-mile	4.7120	0.4712	0.1555	0.0235
					Max/Total	**4.716**	**0.472**	**0.156**	**0.0236**
Vertical Construction									
Site Grading	0.00	acres/day	0	0.429	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping	0	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	3.0	vehicle-miles/day	340	1.18	lbs/vehicle-mile	3.5340	0.3534	0.6008	0.0910
					Max/Total	**3.534**	**0.353**	**0.601**	**0.0910**
Flatwork and Paving									
Site Grading	0.50	acres/day	32	0.429	lbs PM10/day/acre	0.2145	0.0195	0.0034	0.0005
Truck Loading & Dumping (Grading Phase)	646	tons/day	20	1.72E-04	lbs/ton	0.1112	0.01684	0.001112	0.000168
Vehicle Miles Off-Road	2.0	vehicle-miles/day	32	1.18	lbs/vehicle-mile	2.3560	0.2356	0.0377	0.0057
					Max/Total	**2.682**	**0.272**	**0.042**	**0.0064**
Interior Finishing									
Site Grading	0.00	acres/day	0	0.429	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	0	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	0.00	vehicle-miles/day	0	1.18	lbs/vehicle-mile	0.0000	0.0000	0.0000	0.0000
					Max/Total	**0.000**	**0.000**	**0.000**	**0.0000**
Exterior Improvements									
Site Grading	0.0	acres/day	0	0.429	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	0	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	0.00	vehicle-miles/day	0	1.18	lbs/vehicle-mile	0.0000	0.0000	0.0000	0.0000
					Max/Total	**0.000**	**0.000**	**0.0000**	**0.0000**

Fugitive Dust Emissions: Inputs for the Table

Emission factors based on following inputs		
Mean number of rain days per year	*0*	*worst case*
Silt content of soil, fill storage pile, %	*1.5*	*SCAQMD default value*
Roadway inputs (paved and unpaved, as per URBEMIS)		
Roads mean vehicle weight, tons	*20.61*	*based on project description, HHDT + LDT and vehicles weight (average of full and empty)*
unpaved dirt road silt content, %	*8.5*	*AP-42 construction sites*
Truck Loading inputs		
k, particle size multiplier, default=0.35 fpr pm10	*0.35*	
U, mean wind speed, mph range 1.3-15	*8.15*	
M, moisture content, default=12%	*12*	
PM2.5/PM10 ratio truck loading	*0.15*	
Site grading emissions from CalEEMod for grading	*0.091*	*ratio of PM2.5/PM10 CalEEMod*
Demolition materials, tons/yds3	*1.000*	*estimated for concrete debris*
Fill materials, tons/yds3	*1.000*	*estimated for soils*

Mitigation: grading/dist area watering (fraction reduction)	*0.61*	*0.61 for watering every 3 hours (SCAQMD)*
Mitigation: roads (fraction reduction)	*0.55*	*0.55 for watering 3X per day (SCAQMD), 0.80 for soil binders applied monthly (AP-42)*

Notes:

PM2.5/PM10 ratio as per AP-42 k factor for PM10 and PM2.5
Demolition dust calculations as per EPA AP-42 11.19 and 13.2.4
Truck loading dumping cut/fill based on CalEEMod
Paved and unpaved road dust emissions based on AP-42 2006 (unpaved) Chapt 13. EPA AP-42 2006 is the same as URBEMS and CalEEMod
One month assumes 22 days of activity, as per URBEMIS

MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 9: Emission Factors and Assumptions

Onsite Construction

				Emission Factors (g/bhp-hr)									Emission Factors (lb/bhp-hr)								
	Tier	Operational Horsepower	Load Factor	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Asphalt Fugitive	EF = lb/acre	--	--	--	2.60	--	--	--	--	--	--	--	--	2.6000	--	--	--	--	--	--	--
Architectural Coating	EF = g/L	--	--	--	50	--	--	--	--	--	--	--	--	0.1102	--	--	--	--	--	--	--
Backhoe	4	125	37	0.260	0.060	0.008	0.008	3.700	0.005	0.0042	0.152	469	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00034	1.0349
Crane	4	250	29	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.153	473	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0427
Compressor-1	4	100	48	0.260	0.060	0.008	0.008	3.700	0.006	0.0042	0.032	568	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00007	1.2529
Compressor-2	4	100	48	0.260	0.060	0.008	0.008	3.700	0.006	0.0042	0.032	568	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00007	1.2529
Dozer	4	200	43	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.153	474	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0450
Excavator	4	160	38	0.260	0.060	0.008	0.008	3.700	0.005	0.0042	0.153	472	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00034	1.0415
Generator-1	4	25	74	2.750	0.120	0.008	0.008	4.100	0.007	0.0042	0.062	568	0.0061	0.0003	0.0000	0.0000	0.0090	0.00002	0.00001	0.00014	1.2529
Generator-2	4	25	74	2.750	0.120	0.008	0.008	4.100	0.007	0.0042	0.062	568	0.0061	0.0003	0.0000	0.0000	0.0090	0.00002	0.00001	0.00014	1.2529
Grader	4	150	41	0.260	0.060	0.008	0.008	3.700	0.005	0.0042	0.155	478	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00034	1.0549
Lift-1	4	50	20	2.740	0.120	0.008	0.008	3.700	0.005	0.0042	0.170	525	0.0060	0.0003	0.0000	0.0000	0.0082	0.00001	0.00001	0.00037	1.1585
Lift-2	4	50	20	2.740	0.120	0.008	0.008	3.700	0.005	0.0042	0.170	525	0.0060	0.0003	0.0000	0.0000	0.0082	0.00001	0.00001	0.00037	1.1585
Loader-1	4	250	36	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0357
Loader-2	4	250	36	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0357
Paving Machine	4	100	42	0.260	0.060	0.008	0.008	3.700	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00034	1.0367
Paving Equipment	4	100	36	0.260	0.060	0.008	0.008	3.700	0.005	0.0042	0.153	473	0.0006	0.0001	0.0000	0.0000	0.0082	0.00001	0.00001	0.00034	1.0432
Paving Roller	4	50	38	2.740	0.120	0.008	0.008	3.700	0.005	0.0042	0.080	568	0.0060	0.0003	0.0000	0.0000	0.0082	0.00001	0.00001	0.00018	1.2529
Scraper-1	4	475	48	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	471	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0393
Scraper-2	4	475	48	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	471	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0393
Water Truck-1	4	400	38	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.154	475	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0477

Offsite Trasporation

			Emission Factors (g/mile)									Emission Factors (lb/mile)								
Source	Tier	Region	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	--	San Joaquin Valley	0.0324	0.0056	0.0009	0.0009	0.6303	0.0026	0.0040	0.0016	267.0	0.0001	0.0000	0.0000	0.0000	0.0014	0.00001	0.00001	0.00000	0.5885
Light-Duty Truck - LDT2 (offsite)	--	San Joaquin Valley	0.0409	0.0088	0.0046	0.0044	0.0842	0.0025	0.0411	0.0004	260.9	0.0001	0.0000	0.0000	0.0000	0.0002	0.00001	0.00009	0.00000	0.5753
Med-Heavy Duty - T6 Utility (offsite)	--	San Joaquin Valley	0.2178	0.0039	0.0042	0.0040	0.0216	0.0092	0.1533	0.0002	972.8	0.0005	0.0000	0.0000	0.0000	0.0000	0.00002	0.00034	0.00000	2.1446
Heavy Duty Trucks - T7TC (offsite)	--	San Joaquin Valley	0.9287	0.0101	0.0199	0.0191	0.0440	0.0133	0.2220	0.0005	1409	0.0020	0.0000	0.0000	0.0000	0.0001	0.00003	0.00049	0.00000	3.1060

Offsite Dust - Mobile Sources

			Emission Factors (g/mile)		Emission Factors (lb/mile)	
Source	Tier	Region	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	--	San Joaquin Valley	0.4263	0.1069	0.000940	0.000236
Light-Duty Truck - LDT2 (offsite)	--	San Joaquin Valley	0.4272	0.1073	0.000942	0.000236
Med-Heavy Duty - T6 Utility (offsite)	--	San Joaquin Valley	0.4642	0.1202	0.001023	0.000265
Heavy Duty Trucks - T7TC (offsite)	--	San Joaquin Valley	0.4923	0.1300	0.001085	0.000287

Notes:

Equipment list and engine sizes estimated.

Equipment criteria pollutant emission factors and load factors were obtained from CalEEMod, Appendix D 2020.

N_2O emission factors for equipment were obtained from *CFR Part 98 Table C-2 and CalEEMod Appendix D 2020.*

CO_2 and CH_4 emission factors for construction equipment were obtained from *CalEEMod Appendix D 2020.*

Vehicle emissions factors obtained from EMFAC-2021

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MILLENNIUM ESTATES DEVELOPMENT

CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS

TABLE 1: OPERATIONAL EMISSIONS SUMMARY

Model Run: June 5, 2025

Source	Peak Day Emissions (lbs/day)													Annual Emissions (tons/yr)											
	NO_x	ROG	$PM_{10}E$*	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$*	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	$PM_{10}E$*	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$*	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	$MTCO_2e$
Operational Phase Without Residential Tenant Vehicle Trip Emissions	1.71	3.91	0.013	0.079	0.091	0.016	0.021	0.036	198	0.010	0.116	23.5	1,776	0.044	0.102	0.0005	0.002	0.003	0.0004	0.0005	0.001	5.14	0.0003	0.005	0.140	209	194
Operational Phase Residential Tenant Vehicle Trip Emissions	1.56	0.28	0.06	20.03	20.10	0.06	0.10	0.16	26.3	0.12	0.397	0.066	12,413	0.284	0.051	0.005	3.66	3.66	0.011	0.917	0.928	4.80	0.022	0.072	0.012	2,265	2,073
Total Operational Phase Emissions	**3.26**	**4.19**	**0.077**	**20.1**	**20.2**	**0.076**	**0.124**	**0.200**	**224**	**0.132**	**0.51**	**23.6**	**14,190**	**0.33**	**0.153**	**0.005**	**3.66**	**3.66**	**0.011**	**0.918**	**0.929**	**9.94**	**0.023**	**0.077**	**0.152**	**2,474**	**2,267**
SJVAPCD Operational Significance Thresholds	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	***10***	***10***	**--**	**--**	***15***	**--**	**--**	***15***	***100***	***27***	**--**	**--**	**--**	**--**
Threshold exceeded?	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	***No***	***No***	**--**	**--**	***No***	**--**	**--**	***No***	***No***	***No***	**--**	**--**	**--**	**--**
Total Yearly DPM Emissions From Onsite Diesel Engine Exhaust, tons*														***0.0005***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
GHG - $MTCO_2E$ conversions																								***273***	***28***	***1***	**--**
Total Operational Phase $MTCO_2E$/yr																								***2,267***			
Amortized Construction Phase Emissions*																								***38.6***			
Total Operational Phase + Amortized Construction Phase Emissions $MTCO_2E$/yr																								***2,306***			

Notes:

Global Warming Potentials (273 for N_2O, 27.9 for CH_4, and 1 for CO_2, Table 7.SM.6, Intergovernmental Panel on Climate Change (IPCC). 2021. Sixth Assessment Report

$MTCO_2E$ - Metric Tons of Carbon Dioxide Equivalent

SJVAPCD - San Joaquin Valley Air Pollution Control District

NO_x - Oxides of Nitrogen

ROG - Reactive Organic Gases

$PM_{2.5}$ - Particulate Matter 2.5 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.

PM_{10} - Particulate Matter 10 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.

DPM - Diesel Particulate Matter

CO - Carbon Monoxide

SO_2 - Sulfur Dioxide

N_2O - Nitrous Oxide

CH_4 - Methane

CO_2 - Carbon Dioxide

* - Inculdes all three phases of construction.

Assumptions:

Operations assumed 7 days per week.

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MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 2: Operations

Landscaping Equipment Sources

Source	BHP	Load Factor	Number	Hours/ Day	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Riding Lawn Mower	25	38	3	6	52	2.265	5.266	0.008	0.010	305.040	0.011	0.005	0.026	623.788	0.854	1.985	0.003	0.004	115.0	0.004	0.002	0.010	235.2	0.022	0.052	0.000	0.000	2.990	0.00011	0.0000	0.0003	6.1142
Trimmer	5	91	2	4	52	1.850	6.648	0.076	0.101	304.458	0.012	0.007	0.034	808.574	0.148	0.533	0.006	0.008	24.4	0.001	0.001	0.003	64.9	0.004	0.014	0.000	0.000	0.635	0.00003	0.0000	0.0001	1.6870
Leaf Blower	5	94	2	6	52	2.693	6.132	0.008	0.010	257.695	0.010	0.006	0.028	658.309	0.335	0.762	0.001	0.001	32.0	0.001	0.001	0.003	81.9	0.009	0.020	0.000	0.000	0.833	0.00003	0.0000	0.0001	2.1282
Other Landscape Equipment	5	58	4	4	52	2.691	6.126	0.008	0.010	257.697	0.010	0.006	0.028	658.309	0.275	0.627	0.001	0.001	26.4	0.001	0.001	0.003	67.3	0.007	0.016	0.000	0.000	0.685	0.00003	0.0000	0.0001	1.7509
														Total	**1.612**	**3.908**	**0.011**	**0.014**	**197.8**	**0.007**	**0.004**	**0.019**	**449.2**	**0.042**	**0.102**	**0.000**	**0.000**	**5.144**	**0.0002**	**0.000**	**0.000**	**11.680**

On-Road Sources

Source	Peak Round Trips/Day	Average Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	1	1	1856	10	365	0.0324	0.0056	0.0009	0.0009	0.6303	0.0026	0.0040	0.0016	267.0	1.325	0.231	0.039	0.036	25.796	0.108	0.162	0.0637	10925.3	0.242	0.042	0.000	0.006	4.708	0.020	0.030	0.012	1994
Light-Duty Truck - LDT2 (offsite)	1	1	259	10	365	0.0409	0.0088	0.0046	0.0044	0.0842	0.0025	0.0411	0.0004	260.9	0.233	0.050	0.026	0.025	0.480	0.014	0.234	0.0023	1488.0	0.043	0.009	0.005	0.005	0.088	0.003	0.043	0.000	272
Passenger Vehicle - EV LDA (offsite)	1	1	19	10	365	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000	0.00001	0.0830	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
Light-Duty Truck - EV LDT2 (offsite)	1	1	1	10	365	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000	0.00001	0.0830	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Med-Heavy Duty - T6 Utility (offsite)	1	1	2	25	52	0.2187	0.0036	0.0041	0.0039	0.0215	0.0092	0.1526	0.0002	968.5	0.024	0.000	0.000	0.000	0.002	0.001	0.017	0.0000	106.8	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.78
Heavy Duty Trucks - T7TC (offsite)	2	2	1	25	52	0.6279	0.0072	0.0110	0.0105	0.0373	0.0140	0.2330	0.0003	1478.9	0.069	0.001	0.001	0.001	0.004	0.002	0.026	0.0000	163.0	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.000	4.24
														Total	**1.65**	**0.282**	**0.066**	**0.062**	**26.282**	**0.125**	**0.439**	**0.0660**	**12,683.1**	**0.287**	**0.051**	**0.005**	**0.011**	**4.795**	**0.022**	**0.074**	**0.01204**	**2,272.4**

On-Road Sources - Within Development Only

Source	Peak Round Trips/Day	Average Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	1	1	1856	10	365	0.4263	0.1069	17.412134	4.36793962	3.177714	0.797149
Light-Duty Truck - LDT2 (offsite)	1	1	259	10	365	0.4272	0.1073	2.431065	0.610346707	0.443669	0.111388
Passenger Vehicle - EV LDA (offsite)	1	1	19	10	365	0.4248	0.1064	0.178125	0.044621775	0.032508	0.008143
Light-Duty Truck - EV LDT2 (offsite)	1	1	1	10	365	0.4248	0.1064	0.009375	0.002348487	0.001711	0.000429
Med-Heavy Duty - T6 Utility (offsite)	1	1	2	25	52	0.4671	0.1212	0.051484	0.013360456	0.001339	0.000347
Heavy Duty Trucks - T7TC (offsite)	1	1	1	25	52	0.4923	0.1300	0.027134	0.007167267	0.000705	0.000186
							Total	**20.109315**	**5.045784**	**3.657646**	**0.917643**

Land Use Sources

Electricity Use (Land Use)

Source	Units	Electricity Use kW/units/yr	Emission Factor (lb/kWh)			Emissions (lb/kWh/day)			Emissions (tons/kWh/yr)		
			N_2O	CH_4	CO_2	N_2O	CH_4	CO_2	N_2O	CH_4	CO_2
Housing Units	211	8,774	0.000004	0.00003	0.2040	0.02029	0.16739	1035	0.00370	0.03055	188.8
Total						**0.02029**	**0.1674**	**1035**	**0.00370**	**0.03055**	**188.8**

Land Use Sources

Electricity Use (Water Use)

Source	Water Use/Year	Emission Factor (lb/kWh)			Emissions (lb/kWh/day)			Emissions (tons/kWh/yr)		
		N_2O	CH_4	CO_2	N_2O	CH_4	CO_2	N_2O	CH_4	CO_2
~~Housing Units~~	~~10,628,070~~	~~0.000004~~	~~0.00003~~	~~0.2040~~	~~0.0000005~~	~~0.000004~~	~~0.02340~~	~~0.0000001~~	~~0.0000007~~	~~0.00427~~
~~Housing Unit Landscaping~~	~~5,623,958~~	~~0.000004~~	~~0.00003~~	~~0.2040~~	~~0.000000~~	~~0.000002~~	~~0.01238~~	~~0.0000000~~	~~0.0000004~~	~~0.00226~~
~~Common Landscaping~~	~~56,755~~	~~0.000004~~	~~0.00003~~	~~0.2040~~	~~0.000000~~	~~0.000000~~	~~0.00012~~	~~0.0000000~~	~~0.0000000~~	~~0.00002~~
~~**Total**~~					~~**0.000001**~~	~~**0.000006**~~	~~**0.035902**~~	~~**0.000000**~~	~~**0.000001**~~	~~**0.006552**~~

Wastewater Treatment

Source	Wastewater Generated (gallons/yr)	Emission Factor (lb/gal)			Emissions (pound/day)			Emissions (tons/year)		
		N_2O	CH_4	CO_2	N_2O	CH_4	CO_2	N_2O	CH_4	CO_2
~~Housing Units~~	~~10,628,070~~	~~0.0000017~~	~~0.0008020~~	~~0.0067800~~	~~0.0496~~	~~23.3526~~	~~22.7120~~	~~0.00002~~	~~0.01168~~	~~0.01136~~
~~**Total**~~					~~**0.0496**~~	~~**23.3526**~~	~~**22.7120**~~	~~**0.0000**~~	~~**0.0117**~~	~~**0.0114**~~

Solid Waste

Source	Solid Waste Generated (tons/yr)	Emission Factor (tons/ton)		Emissions (pound/day)		Emissions (tons/year)	
		CH_4	CO_2	CH_4	CO_2	CH_4	CO_2
~~Housing Units~~	~~11.5~~	~~0.00844~~	~~0.09846~~	~~0.00029~~	~~0.0034~~	~~0.0969~~	~~1.1310~~
			~~**Total**~~	~~**0.0003**~~	~~**0.0034**~~	~~**0.10**~~	~~**1.13**~~

Notes:

- ~~Square~~ footage and number of units provided by client
- Occupancy rate of 100% used
- VMT and round trips for LDA and LDT2 were obtained from traffic studies.
- Assumes 1% of vehicles will be electric vehicles.

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MILLENNIUM ESTATES DEVELOPMENT
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 3: Operational Emission Factors and Assumptions

Onsite Maintenance

				Emission Factors (g/bhp-hr)									Emission Factors (lb/bhp-hr)								
Source	Tier	Operational Horsepower	Load Factor	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Riding Lawn Mower	--	25	38	2.265	5.266	0.008	0.010	305.040	0.011	0.005	0.026	624	0.0050	0.0116	0.0000	0.0000	0.6725	0.00002	0.00001	0.00006	1.3752
Trimmer	--	5	91	1.850	6.648	0.076	0.101	304.458	0.012	0.007	0.034	809	0.0041	0.0147	0.0002	0.0002	0.6712	0.00003	0.00002	0.00007	1.7826
Leaf Blower	--	5	94	2.693	6.132	0.008	0.010	257.695	0.010	0.006	0.028	658	0.0059	0.0135	0.0000	0.0000	0.5681	0.00002	0.00001	0.00006	1.4513
Other Landscape Equipment	--	5	58	2.691	6.126	0.008	0.010	257.697	0.010	0.006	0.028	658	0.0059	0.0135	0.0000	0.0000	0.5681	0.00002	0.00001	0.00006	1.4513

Onsite

				Emission Factors, g/kBTU									Emission Factors (lb/kBTU)								
Source	Tier	Operational Horsepower	Load Factor	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Natural Gas Residential	--	--	--	0.041802	0.002446	0.003380	0.003380	0.017788	0.000267	0.000100	0.004696	53.059937	0.000092	0.000005	0.000007	0.000007	0.000039	0.000001	0.000000	0.000010	0.116977
Natural Gas Commercial	--	--	--	0.044470	0.002446	0.003380	0.003380	0.037355	0.000267	0.000100	0.004696	53.059937	0.000092	0.000005	0.000007	0.000007	0.000039	0.000001	0.000000	0.000010	0.116977

Offsite

			Emission Factors (g/mile)									Emission Factors (lb/mile)								
Source	Tier	Region	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	--	San Joaquin Valley	0.0324	0.0056	0.0009	0.0009	0.6303	0.0026	0.0040	0.0016	267	0.0001	0.0000	0.0000	0.0000	0.0014	0.00001	0.00001	0.00000	0.5885
Passenger Vehicle - EV LDA (offsite)	--	San Joaquin Valley	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000002	0.00001	0.0830	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000	0.0002
Light-Duty Truck - LDT2 (offsite)	--	San Joaquin Valley	0.0409	0.0088	0.0046	0.0044	0.0842	0.0025	0.0411	0.0004	261	0.0001	0.0000	0.0000	0.0000	0.0002	0.00001	0.00009	0.00000	0.5753
Light-Duty Truck - EV LDT2 (offsite)	--	San Joaquin Valley	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000002	0.00001	0.0830	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000	0.00000	0.00000	0.0002
Med-Heavy Duty - T6 Utility (offsite)	--	San Joaquin Valley	0.2187	0.0036	0.0041	0.0039	0.0215	0.0092	0.1526	0.0002	969	0.0005	0.0000	0.0000	0.0000	0.0000	0.00002	0.00034	0.00000	2.1352
Heavy Duty Trucks - T7TC (offsite)	--	San Joaquin Valley	0.6279	0.0072	0.0110	0.0105	0.0373	0.0140	0.2330	0.0003	1479	0.0014	0.0000	0.0000	0.0000	0.0001	0.00003	0.00051	0.00000	3.2604

Offsite Dust - Mobile Sources

			Emission Factors (g/mile)		Emission Factors (lb/mile)	
Source	Tier	Region	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	--	San Joaquin Valley	0.4263	0.1069	0.000940	0.000236
Passenger Vehicle - EV LDA (offsite)	--	San Joaquin Valley	0.4248	0.1064	0.000937	0.000235
Light-Duty Truck - LDT2 (offsite)	--	San Joaquin Valley	0.4272	0.1073	0.000942	0.000236
Light-Duty Truck - EV LDT2 (offsite)	--	San Joaquin Valley	0.4248	0.1064	0.000937	0.000235
Med-Heavy Duty - T6 Utility (offsite)	--	San Joaquin Valley	0.4671	0.1212	0.001030	0.000267
Heavy Duty Trucks - T7TC (offsite)	--	San Joaquin Valley	0.4923	0.1300	0.001085	0.000287

Offsite

Source	Energy Consumption (kWh/mile)
Passenger Vehicle - EV LDA (offsite)	0.40674
Light-Duty Truck - EV LDT2 (offsite)	0.40674

Electricity Emission Factors

		Emission Factors (lb/kWhr)		
Source	Electricity Use Region	N_2O	CH_4	CO_2
Electricity Usage	California	0.000004	0.00003	0.2040

Electricity Use by Land Use

Source	kWh/Unit/Year
	Electricity
Housing Units	8,774.39

Water Energy-Intensity

Source	kWh/Gal
Project Site	0.00394

Solid Waste Disposal Rate

Source	Region	Rate (Tons/Year)
Housing Units	King County	15

Solid Waste Emissions Factors

Landfill Type	CH_4 (tons/ton)	CO_2 (tons/ton)
No Landfill Gas Collection	0.0084	0.0985

Water Use Rates

				Water Use		
Source	Units or Square Feet	Indoor Water Use (gal/unit or Square Feet per yr)	Outdoor Water Use (gal/unit or gal/Square Feet per yr)	Total Indoor Water Use (gal)	Total Outdoor Water Use (gal)	Total Water Use (gal)
Housing Units	211	50,370	0.000	10,628,070	0.000	10,628,070
Housing Unit Landscaping	316,500	0.00	17.77	0.00	5,623,958	5,623,958
Common Landscaping	3,194	0.00	17.77	0.00	56,755	56,755
			Total	10,628,070	5,680,713	16,308,783

Wastewater Treatment

	Emission Factor (lb/gal)		
Source	N_2O	CH_4	CO_2
Wastewater Treatment	0.0000017	0.000802	0.00078

Climate Zone	3

Recycling and Composting

Recycling and Composting Program	Percentage of Waste Recycled or Composted
	25

Notes:

- Equipment list and engine sizes estimated.
- Equipment criteria pollutant emission factors and load factors were obtained from CalEEMod, Appendix D 2020 and CalEEMod, Appendix G, 2022.
- Electricity and Natural Gas Emission Factors were obtained from CalEEMod, Appendix G 2022.
- Electricity Use by Land Use obtained from CalEEMod, Appendix D 2020.
- N_2O emission factors for equipment were obtained from *CFR Part 98 Table C-2 and CalEEMod Appendix D- 20164.*
- CO_2 and CH_4 emission factors for construction equipment were obtained from *CalEEMod Appendix D 2020.*
- CO_2 and CH_4 emission were obtained from *CalEEMod Appendix G 2022.*
- Vehicle emissions factors obtained from EMFAC-2021
- Solid waste and waste water emission factors and waste disposal rates obtained from CalEEMod Appendix G 2022
- Water use rates and wastewater treatment rates obtained from CalEEMod Appendix G 2022
- Waste disposal rates obtained from CalEEMod Appendix G 2022

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Prioritization Screening Calculations

Name	Prioritization Calculator									
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.									
Author or updater	Matthew Cegielski		*Last Update*	December 1, 2022						
Facility: Proposed Millenium Estates Subdivision **ID#:** N/A **Project #:** 2402-3001 **Unit and Process#:** Construction Project **- Year 1**	Construction - Full Project Site Emissions									
Operating Hours hr/yr*	2,000.00									

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	1.000	28.1820	0.1830	0.0000	28.1820
100≤R<250	0.250	7.0455	0.0458	0.0000	7.0455
250≤R<500	0.040	1.1273	0.0073	0.0000	1.1273
500≤R<1000	0.011	0.3100	0.0020	0.0000	0.3100
1000≤R<1500	0.003	0.0845	0.0005	0.0000	0.0845
1500≤R<2000	0.002	0.0564	0.0004	0.0000	0.0564
2000<R	0.001	0.0282	0.0002	0.0000	0.0282

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

* - Based on 250 work days per year 8 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

Construction - Full Project Site Emissions

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	1.0000	1.22E+01	6.10E-03	1.22E+01	6.10E-03	6.10E-03	2.82E+01	1.83E-01	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	2.82E+01	1.83E-01	0.00E+00

Prioritization Calculator

Name

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski *Last Update* December 1, 2022

Facility: Proposed Millenium Estates Subdivision
ID#: N/A
Project #: 2402-3001
Unit and Process#: Construction Project **- Year 2** Construction - Full Project Site Emissions

Operating Hours hr/yr* 2,000.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	10.1640	0.0660	0.0000	10.1640
100≤R<250	**0.250**	2.5410	0.0165	0.0000	2.5410
250≤R<500	**0.040**	0.4066	0.0026	0.0000	0.4066
500≤R<1000	**0.011**	0.1118	0.0007	0.0000	0.1118
1000≤R<1500	**0.003**	0.0305	0.0002	0.0000	0.0305
1500≤R<2000	**0.002**	0.0203	0.0001	0.0000	0.0203
2000<R	**0.001**	0.0102	0.0001	0.0000	0.0102

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

* - Based on 250 work days per year 8 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

Construction - Full Project Site Emissions

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	**1.0000**	4.40E+00	2.20E-03	4.40E+00	2.20E-03	2.20E-03	1.02E+01	6.60E-02	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	**1.02E+01**	**6.60E-02**	**0.00E+00**

Name | **Prioritization Calculator**

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski *Last Update* December 1, 2022

Facility: Proposed Millenium Estates Subdivision
ID#: N/A
Project #: 2402-3001
Unit and Process#: Construction Project **- Year 3** — Construction - Full Project Site Emissions
Operating Hours hr/yr* 2,000.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	4.6200	0.0300	0.0000	4.6200
100≤R<250	**0.250**	1.1550	0.0075	0.0000	1.1550
250≤R<500	**0.040**	0.1848	0.0012	0.0000	0.1848
500≤R<1000	**0.011**	0.0508	0.0003	0.0000	0.0508
1000≤R<1500	**0.003**	0.0139	0.0001	0.0000	0.0139
1500≤R<2000	**0.002**	0.0092	0.0001	0.0000	0.0092
2000<R	**0.001**	0.0046	0.0000	0.0000	0.0046

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

* - Based on 250 work days per year 8 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

Construction - Full Project Site Emissions

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	**1.0000**	2.00E+00	1.00E-03	2.00E+00	1.00E-03	1.00E-03	4.62E+00	3.00E-02	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	**4.62E+00**	**3.00E-02**	**0.00E+00**

Name	Prioritization Calculator
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski *Last Update* December 1, 2022

Facility: Proposed Millenium Estates Subdivision
ID#: N/A
Project #: 2402-3001
Unit and Process#: Construction Project **- Year 1**

Construction - Only DPM emissions within 0 to 100 meters of Receptor 1

Operating Hours hr/yr* 2,000.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	1.8480	0.0120	0.0000	1.8480
100≤R<250	**0.250**	0.4620	0.0030	0.0000	0.4620
250≤R<500	**0.040**	0.0739	0.0005	0.0000	0.0739
500≤R<1000	**0.011**	0.0203	0.0001	0.0000	0.0203
1000≤R<1500	**0.003**	0.0055	0.0000	0.0000	0.0055
1500≤R<2000	**0.002**	0.0037	0.0000	0.0000	0.0037
2000<R	**0.001**	0.0018	0.0000	0.0000	0.0018

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

* - Based on 250 work days per year 8 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

ction - Only DPM emissions within 0 to 100 meters of Re

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	**1.0000**	8.00E-01	4.00E-04	8.00E-01	4.00E-04	4.00E-04	1.85E+00	1.20E-02	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	**1.85E+00**	**1.20E-02**	**0.00E+00**

Name	Prioritization Calculator
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski *Last Update* December 1, 2022

Facility: Proposed Millenium Estates Subdivision
ID#: N/A
Project #: 2402-3001
Unit and Process#: Construction Project **- Year 1**

Construction - Only DPM emissions within 0 to 100 meters of Receptor 2

Operating Hours hr/yr* 2,000.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	3.6960	0.0240	0.0000	3.6960
100≤R<250	**0.250**	0.9240	0.0060	0.0000	0.9240
250≤R<500	**0.040**	0.1478	0.0010	0.0000	0.1478
500≤R<1000	**0.011**	0.0407	0.0003	0.0000	0.0407
1000≤R<1500	**0.003**	0.0111	0.0001	0.0000	0.0111
1500≤R<2000	**0.002**	0.0074	0.0000	0.0000	0.0074
2000<R	**0.001**	0.0037	0.0000	0.0000	0.0037

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

* - Based on 250 work days per year 8 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

ction - Only DPM emissions within 0 to 100 meters of Re

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	**1.0000**	1.60E+00	8.00E-04	1.60E+00	8.00E-04	8.00E-04	3.70E+00	2.40E-02	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	**3.70E+00**	**2.40E-02**	**0.00E+00**

Name	Prioritization Calculator									
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.									
Author or updater	Matthew Cegielski		*Last Update*	December 1, 2022						
Facility: Proposed Copper Ridge Residential Development **ID#:** N/A **Project #:** 2402-3001 **Unit and Process#:** Operational Project	Operations									
Operating Hours hr/yr*	8,760.00									

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	1.000	2.3100	0.0034	0.0000	2.3100
100≤R<250	0.250	0.5775	0.0009	0.0000	0.5775
250≤R<500	0.040	0.0924	0.0001	0.0000	0.0924
500≤R<1000	0.011	0.0254	0.0000	0.0000	0.0254
1000≤R<1500	0.003	0.0069	0.0000	0.0000	0.0069
1500≤R<2000	0.002	0.0046	0.0000	0.0000	0.0046
2000<R	0.001	0.0023	0.0000	0.0000	0.0023

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Cumene	98828

* - Based on 365 work days per year 24 hours per day
** - Based on max daily PM10 emissions.
*** - Annual PM10 emissions for mobile diesel emissions sources only

Operations

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	MW Correction	Annual Emissions (lbs/yr)***	Maximum Hourly (lbs/hr)**	Corrected Annual Emissions (lbs/yr)	CorrectedMaximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	1.0000	1.00E+00	1.14E-04	1.00E+00	1.14E-04	1.14E-04	2.31E+00	3.42E-03	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0.0000			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
							Totals	**2.31E+00**	**3.42E-03**	**0.00E+00**

Prioritization Scores By Year and Phase - Total Project Emissions					
Receptor Proximity and Proximity Factors		Construction Year 1	Construction Year 2	Construction Year 3	Operational Only
0< R<100	1.000	28.18	10.16	4.62	2.31
100≤R<250	0.250	7.05	2.54	1.16	0.578
250≤R<500	0.040	1.13	0.407	0.185	0.092
500≤R<1000	0.011	0.310	0.112	0.051	0.025
1000≤R<1500	0.003	0.085	0.030	0.014	0.007
1500≤R<2000	0.002	0.056	0.020	0.009	0.005
2000<R	0.001	0.028	0.010	0.005	0.002

Prioritization Scores - Emissions within 0 to 100 meters of Sensitive Receptor 1 Construction Year 1		
Receptor Proximity and Proximity Factors		Construction Year 1
0< R<100	1.000	1.85

Prioritization Scores - Emissions within 0 to 100 meters of Sensitive Receptor 2 Construction Year 1		
Receptor Proximity and Proximity Factors		Construction Year 1
0< R<100	1.000	3.70

Appendix B

Biological Evaluation

LIVE OAK
ASSOCIATES, INC.

BIOLOGICAL EVALUATION
MILLENNIUM ESTATES
HANFORD, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.
Austin Pearson, Vice President
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May 21, 2025 2962-01

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) investigated the biological resources of an approximately 30.9-acre parcel in Hanford, California that is proposed for a residential subdivision, and evaluated potential project-related impacts to such resources pursuant to the California Environmental Quality Act (CEQA). This site is located immediately west of 12 ½ Avenue, approximately 0.3 mile north of California State Route 198.

The project site was surveyed on May 7, 2025 for its biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law. At the time, the site consisted of an alfalfa field, associated agricultural roads, and the uncultivated margins of these uses. The site supported a variety of weedy grasses and forbs typical of a disturbed agricultural environment. The project site did not contain wildlife movement corridors, sensitive natural communities, designated critical habitat, or state or federally protected waters or wetlands.

Two special status species known from the vicinity have some potential to occur on site, and project related impacts to these species are considered potentially significant under CEQA. These include Swainson's hawk and pallid bat. Project related impacts are also considered potentially significant for other nesting birds and raptors. Impacts to the Swainson's hawk and other nesting birds and raptors will be reduced to a less than significant level by either constructing the project outside of the nesting season or, if construction must occur during the nesting season, conducting preconstruction surveys and avoiding active nests. Impacts to pallid bat and other roosting bats will be reduced by either constructing the project outside of pupping season, or, if construction must occur during pupping season, by conducting preconstruction surveys and avoiding active roosts. If construction occurs outside of pupping season but bats are found to be roosting in tree cavities, they will be humanely evicted by a qualified biologist.

The project will either have no impact or a less than significant impact, as defined by CEQA, on the following biotic resources: all 10 special plant species known to occur in the region; twelve special status animal species that would not likely use the site (i.e., the project site is outside their typical range or habitats of the site are not suitable for them); two special status animal species that may occasionally use habitats of the project site for foraging; jurisdictional waters; wildlife movement corridors; and sensitive natural communities and designated critical habitat. The project appears to be consistent with City of Hanford General Plan policies related to biological resources and is presumably not subject to any Habitat Conservation Plans or Natural Community Conservation Plans.

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **ii**

1.0 INTRODUCTION **1**

1.1 PROJECT LOCATION **1**

1.2 PROJECT DESCRIPTION **1**

1.3 REPORT OBJECTIVES **1**

2.0 EXISTING CONDITIONS **6**

2.1 REGIONAL SETTING **6**

2.2 PROJECT SITE **7**

2.3 BIOTIC HABITATS **7**

2.4 SPECIAL STATUS PLANTS AND ANIMALS **10**

2.5 JURISDICTIONAL WATERS **16**

2.6 DESIGNATED CRITICAL HABITAT **16**

2.7 CALIFORNIA SENSITIVE NATURAL COMMUNITIES **16**

2.8 WILDLIFE MOVEMENT CORRIDORS **17**

3.0 RELEVANT GOALS, POLICIES, AND LAWS **18**

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT **18**

3.2 OTHER RELEVANT LAWS AND POLICIES **19**

3.2.1 General Plan Policies of the City of Hanford 19
3.2.2 Threatened and Endangered Species 20
3.2.3 California Fully Protected Species 20
3.2.4 Migratory Birds 21
3.2.5 Birds of Prey 21
3.2.6 Nesting Birds 22
3.2.7 Habitat Conservation Plans and Natural Community Conservation Plans 22
3.2.8 Wetlands and Other Jurisdictional Waters 22

4.0 IMPACTS AND MITIGATIONS **25**

4.1 POTENTIALLY SIGNIFICANT PROJECT IMPACTS **25**

4.1.2 Potential Project Impacts to the Swainson's Hawk 25
4.1.2 Potential Project Impacts to Other Nesting Raptors and Migratory Birds 26

4.2 LESS THAN SIGNIFICANT PROJECT IMPACTS **28**

4.2.1 Potential Project Impacts to Special Status Plants 28
4.2.2 Potential Project Impacts to Special Status Animal Species Absent from or Unlikely to Occur Within the Project Site 29
4.2.3 Project Impacts to Special Status Animal Species that Would Use the Site for Non-Sensitive Activities Only 29

4.2.4 Potential Project Impacts to Jurisdictional Waters 30
4.2.5 Potential Project Impacts to Wildlife Movement Corridors 30
4.2.6 Project Impacts to Sensitive Natural Communities and Designated Critical Habitat 30
4.2.7 Consistency with Local Policies and Ordinances 30
4.2.8 Consistency with Habitat Conservation Plans and Natural Community Conservation Plans 30

LITERATURE REFERENCED OR CITED 32

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE 34

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES POTENTIALLY OCCURRING ON THE PROJECT SITE 37

APPENDIX C: SELECT PHOTOGRAPHS OF THE PROJECT SITE 41

1.0 INTRODUCTION

Live Oak Associates, Inc. (LOA) conducted an investigation of the biotic resources of an approximately 30.9-acre parcel ("project site" or "site") in Hanford, California that is proposed for a residential subdivision. This report describes the biotic habitats of the project site, evaluates the suitability of each habitat for special status plant and animal species, identifies potentially significant impacts to sensitive or protected biological resources from the project and proposes measures that, if implemented, would mitigate those impacts to a less than significant level as defined by the California Environmental Quality Act (CEQA).

1.1 PROJECT LOCATION

The project site is located immediately west of 12 ½ Avenue, approximately 0.18 mile south of West Lacey Boulevard, 0.25 mile east of 13th Avenue, and approximately 0.3 mile north of California State Route 198 within the western limits of the City of Hanford in Kings County (Figure 1). The site can be found on the *Hanford* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Section 34, Township 18 South, Range 21 East; Mount Diablo Base and Meridian (Figure 2).

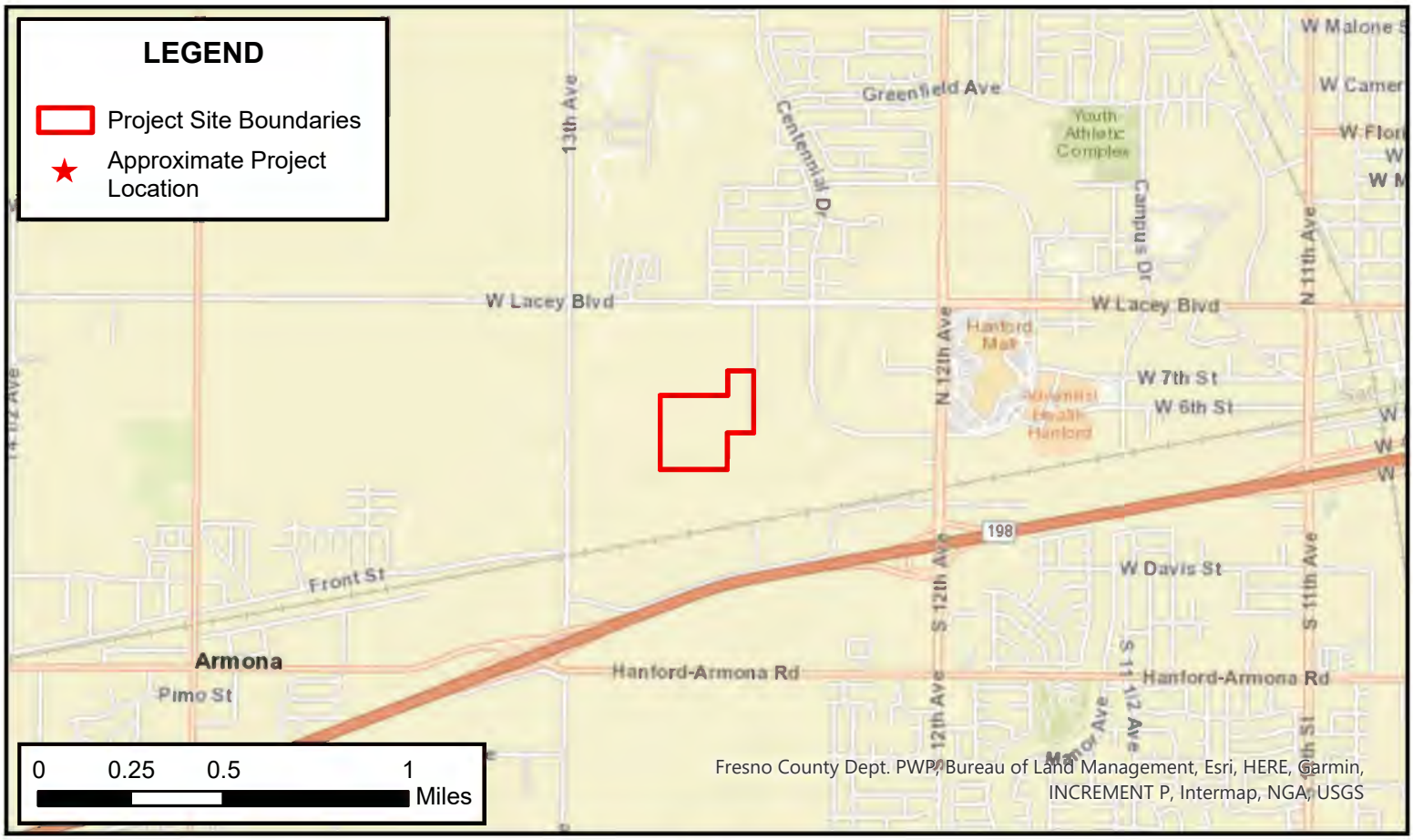
1.2 PROJECT DESCRIPTION

The project is the subdivision of the parcel into 211 residential lots followed by site development with single-family residences, roads, and other residential infrastructure (Figure 3).

1.3 REPORT OBJECTIVES

This report summarizes a biological study conducted by LOA to facilitate environmental review pursuant to CEQA. As such, the report's objectives are to:

- Characterize the project site's existing biological resources, including biotic habitats, flora and fauna, soils, and aquatic resources
- Evaluate the project site's potential to support sensitive resources such as special status species, sensitive natural communities, and jurisdictional waters and wetlands
- Summarize all state and federal natural resource protection laws that may be relevant to project implementation



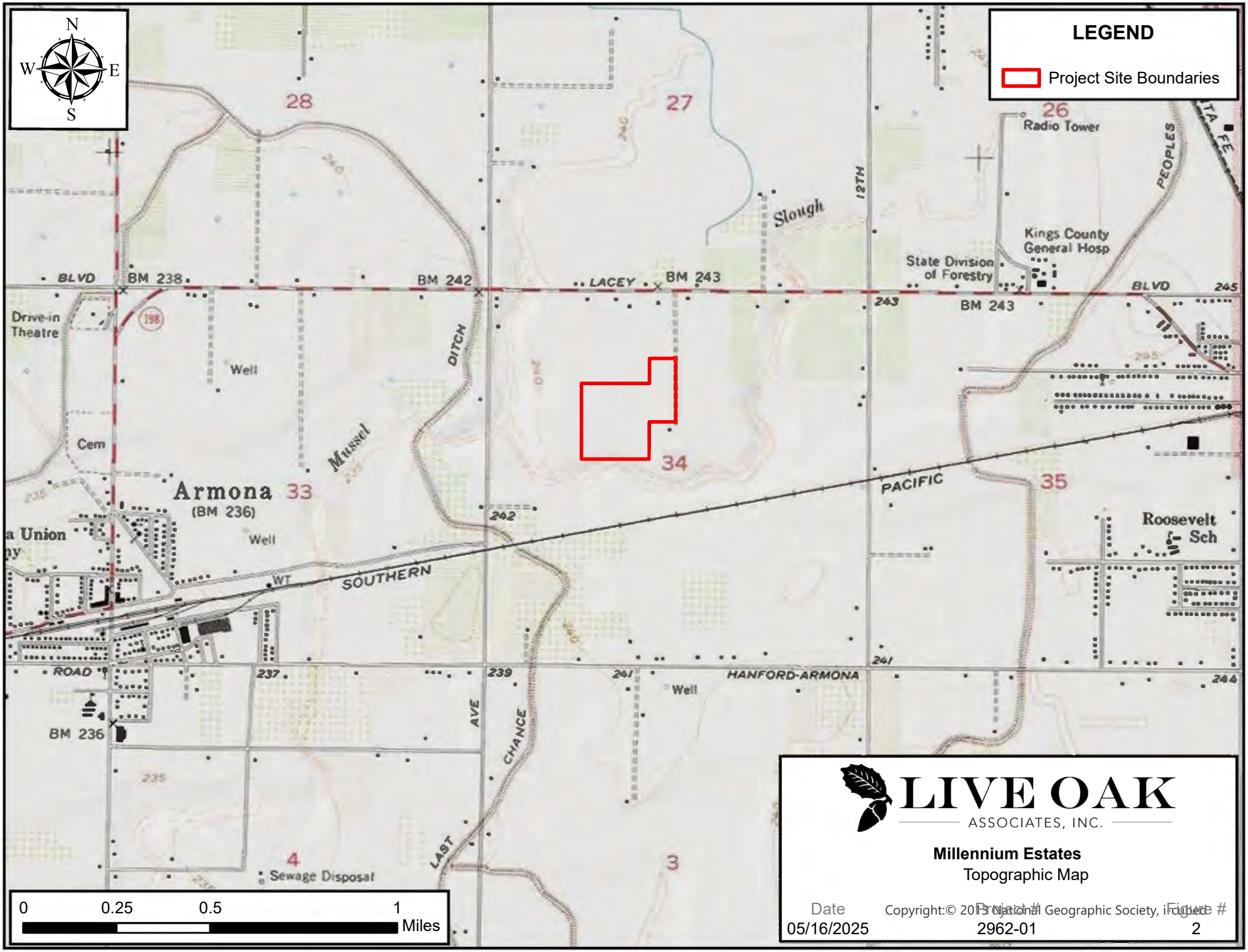




LIVE OAK
ASSOCIATES, INC.

Millennium Estates
Vicinity Map

Date	Project #	Figure #
05/16/2025	2962-01	1

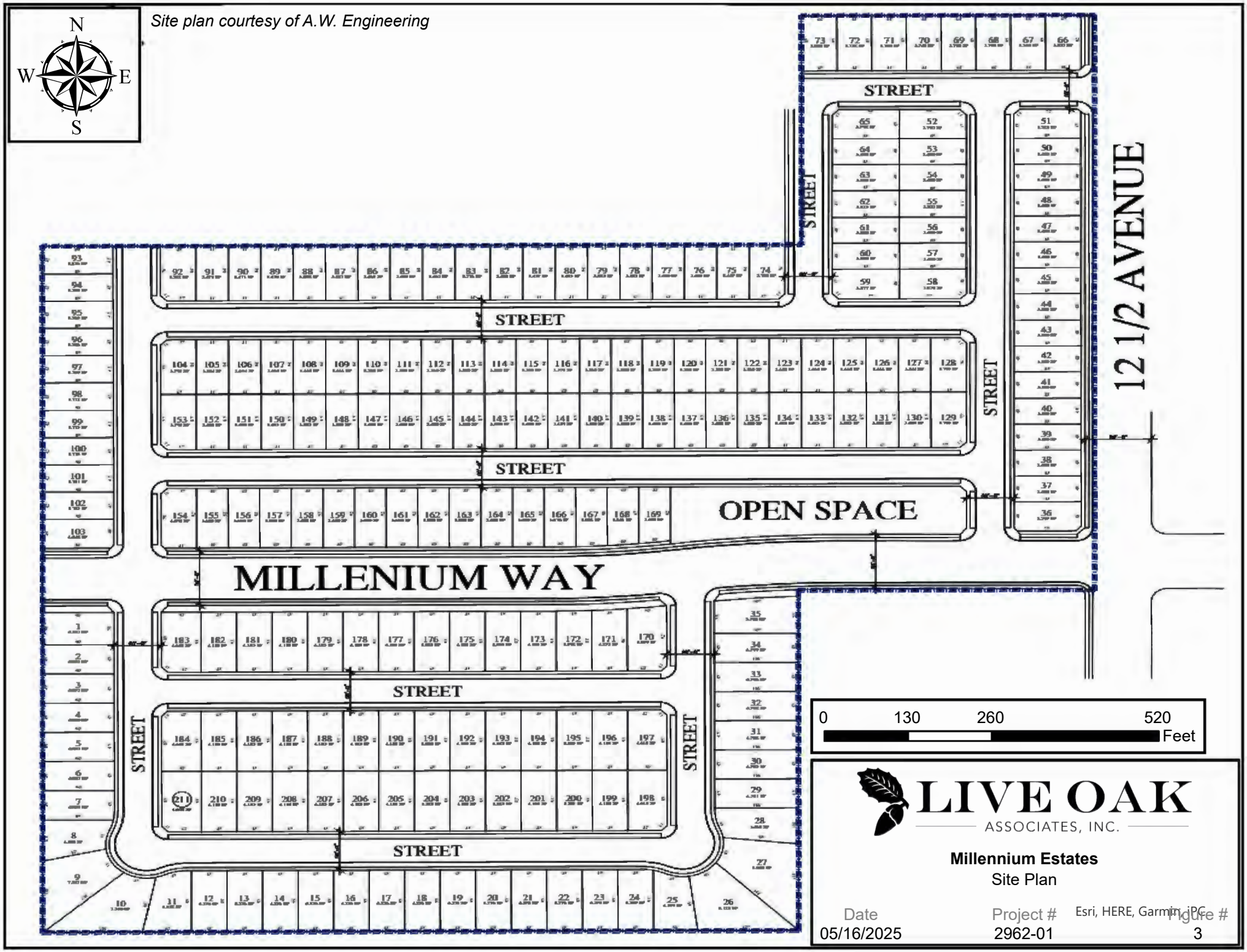


LIVE OAK
ASSOCIATES, INC.

Millennium Estates
Topographic Map

Date	Project #	Figure #
05/16/2025	2962-01	2

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Site plan courtesy of A.W. Engineering
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12 1/2 AVENUE
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ASSOCIATES, INC.
Millennium Estates
Site Plan
Date
05/16/2025
Project #
2962-01
Figure #
3
Esri, HERE, Garmin, iPC

- Identify and discuss potential project-related impacts to biological resources within the context of CEQA and other state and federal laws
- Identify avoidance and mitigation measures that would reduce the magnitude of project-related impacts in a manner consistent with CEQA and species-specific guidelines

1.4 STUDY METHODOLOGY

The analysis of impacts, as discussed in Section 3.0 of this report, is based on the known and potential biotic resources of the project site (discussed in Section 2.0). Sources of information used in the preparation of this analysis include: (1) the *California Natural Diversity Data Base* (CDFW 2025); (2) the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2025); (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley; and (4) other available planning documents and biological studies from the general project vicinity. A field survey of the project site was conducted on May 7, 2025 by LOA biologist Natalie Neff. The survey entailed conducting a meandering walk through the project site while identifying the principal land uses of the project site and the constituent plants and animals of each land use. The field survey conducted for this study was sufficient to assess the significance of possible biological impacts associated with the development plans for the project site.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The project site is located in the central Tulare Basin, which lies in the southern portion of the San Joaquin Valley. The San Joaquin Valley is a large, nearly flat alluvial plain bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coast ranges to the west, and the Sacramento-San Joaquin Delta to the north.

The San Joaquin Valley experiences a Mediterranean climate with warm, dry summers followed by cool, moist winters. Summer temperatures commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the project vicinity varies considerably from year to year, but averages approximately 8 inches, almost all of which falls between the months of October and March in the form of rain (NOAA 2025).

The project vicinity is characterized by a mix of urban and agricultural uses. Areas immediately surrounding the project site consist of agricultural lands in all directions, a small residential area to the north, a second small residential area and in-progress construction to the east, and a sporadically inundated, remnant segment of Mussel Slough to the south, a portion of which was historically excavated as a borrow pit and is now used as an overflow basin by the city and surrounding agricultural growers.

In addition to the remnant portion of Mussel Slough to the south, several other aquatic features lie within the near vicinity of the project site. From closest to farthest, these include a retention basin 310 feet to the southwest, two other remnant segments of Mussel Slough 610 feet to the southeast and 0.25 mile to the west, Last Chance Ditch approximately 0.3 mile west, and a retention basin approximately 0.6 mile east.

The Kings River is the principal natural drainage in the region and runs east to west, beginning in the Sierra Nevada mountain range. The Kings River passes approximately 7 miles north of the project site at its closest point.

2.2 PROJECT SITE

At the time of LOA's survey, the project site consisted primarily of an alfalfa field with associated agricultural roads and small strips of disturbed vegetation along the edges of the boundaries. Analysis of aerial imagery indicates that the site has been used for agricultural purposes since at least 1957 (Historic Aerials 2025).

The site is relatively flat with an elevation of approximately 223 feet National Geodetic Vertical Datum (NGVD) (see Figure 2). Soils of the site comprise Nord fine sandy loam and Nord complex. Neither soil is considered hydric, meaning they do not have the propensity to pond water and support hydrophytic (water-loving) vegetation. The soils of the project site have been substantially altered due to decades of agricultural use of the site and, as a result, no longer maintain their native soil characteristics and would have no particular significance to biological resources of the site.

An aerial view of the site is presented in Figure 4. A list of vascular plants identified on the site is presented in Appendix A. A list of terrestrial vertebrates using or potentially using the project site is presented in Appendix B. Representative photos of the site are presented in Appendix C.

2.3 BIOTIC HABITATS

At the time of LOA's field survey, the project site consisted primarily of an alfalfa field with associated agricultural roads and small strips of uncultivated land. Vegetation within this habitat predominantly consisted of alfalfa (*Medicago sativa*). Prickly lettuce (*Lactuca serriola*), sunflower (*Helianthus annuus*), shortpod mustard (*Hirschfeldia incana*), Canada fleabane (*Erigeron canadensis*), and cultivated wheat (*Triticum aestivum*) were also found growing in the alfalfa field and along the edges of the field. Plant diversity increased along the edges of the field and within the uncultivated margins and included forb species such as prickly lettuce, redroot amaranth (*Amaranthus retroflexus*), silverleaf nightshade (*Solanum elaegnifolium*), cheeseweed (*Malva parviflora*), fiddleneck (*Amsinckia sp.*), pineapple weed (*Matricaria discoidea*), cultivated wheat, oat (*Avena spp.*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and annual bluegrass (*Poa annua*), among others. Four ornamental trees line the



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Millennium Estates
Aerial Map

Date	Project #	Figure #
05/16/2025	2962-01	4

northern edge of the project site and includes two red eucalyptus (*Eucalyptus camaldulensis*), a Peruvian pepper tree (*Schinus molle*), and a young, bushy Chinese pistache (*Pistachia chinensis*).

A number of wildlife species have adapted to make use of agricultural lands and may be found in or adjacent to the site's alfalfa field. Birds such as American pipits (*Anthus spinoletta*), red-winged blackbirds (*Agelaius phoeniceus*), American crows (*Corvus brachyrhnchos*), and mourning doves (*Zenaida macroura*) could forage in the field along with open country raptors such as red-tailed hawks (*Buteo jamaicensis*) and American kestrels (*Falco sparverius*). Ground nesting birds such as the mourning dove and western meadowlark (*Sturnella neglecta*) may nest in the field, while the disturbance tolerant killdeer (*Charadrius vociferus*) could nest along the adjoining dirt roads. The trees along the northern edge of the field could provide nesting habitat for species such as American crows, northern mockingbirds (*Mimus polyglottos*), and American robins (*Turdus migratorius*) and the largest eucalyptus could support nesting by raptors such as red-tailed hawks.

Amphibians such as the Pacific chorus frog (*Pseudacris regilla*) and western toad (*Anaxyrus boreas*) could breed during periods of inundation in nearby aquatic habitats and subsequently disperse through the field. Reptiles like valley gartersnake (*Thamnophis sirtalis fitchi*), gophersnake (*Pituophis melanoleucus*), common kingsnake (*Lampropeltis getulus*), and western fence lizard (*Sceloporus occidentalis*) may forage on the project site as well.

Small mammal use of the project site may include Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), Audubon's cottontail (*Sylvilagus auduboni*), and California ground squirrel (*Otospermophilis beecheyi*). At the time of LOA's survey, burrowing rodent activity was primarily restricted to the agricultural roads and uncultivated margins.

Common mammalian predators such as coyotes (*Canis latrans*), raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and Virginia opossums (*Didelphis virginiana*) may forage through the project site. Various bat species may forage over the project site and could feasibly roost in the mature trees on the project site. The dense canopies could support foliage roosting bats, such as hoary bats (*Lasiurus cinereus*), while cracks that may form in the trunks of the mature trees may be suitable for crevice roosting species like Pallid bat (*Antrozous pallidus)* or Yuma myotis (*Myotis yumanensis*).

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Many species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.0, state and federal laws have provided California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as threatened or endangered under state and federal endangered species legislation. Others have been designated as "candidates" for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists (i.e., California Rare Plant Ranks, or CRPR) of native plants considered rare, threatened, or endangered (CNPS 2025). Collectively, these plants and animals are referred to as "special status species."

The California Natural Diversity Data Base (CNDDB) was queried for special status plant and animal occurrences in the nine USGS 7.5-minute quadrangles containing and surrounding the project site (*Riverdale, Laton, Burris Park, Lemoore, Hanford, Remnoy, Stratford, Guernsey,* and *Waukena*). A number of special status plants and animals were returned in the query and are summarized below in Table 1. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2025), *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al 2012), the *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2025), *Calflora.org,* and *eBird.org*.

TABLE 1. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

PLANTS

CNPS-listed Species

Species	Status	Habitat	*Occurrence within the Project Site
Earlimart Orache (*Atriplex cordulata var. erecticaulis*)	CRPR 1B.2	Occurs in valley and foothill grasslands between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Brittlescale (*Atriplex depressa*)	CRPR 1B.2	Occurs in chenopod scrub, valley and foothill grassland, meadows and seeps, playas, and vernal pools. It is rarely found in riparian or marsh habitats. Blooms April-October; elevations below 1,050 ft.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Lesser Saltscale (*Atriplex minuscula*)	CRPR 1B.1	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevation 50-660 ft.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Subtle Orache (*Atriplex subtilis*)	CRPR 1B.2	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	**Absent.** Vernal pool habitat is absent from the project site.
Recurved Larkspur (*Delphinium recurvatum*)	CRPR 1B.2	Occurs in alkaline soils of cismontane woodland and valley and foothill grasslands in elevations 100 – 2,000 feet. Blooms March-June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CRPR 1B.1	Occurs in valley grassland, alkali sink, wetland riparian areas less than 328 ft. in elevation in the southern Sacramento Valley and San Joaquin Valley. Blooms February – June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Panoche Pepper-grass (*Lepidium jaredii ssp. album*)	CRPR 1B.2	Occurs in valley grassland, dry streambeds, and alluvial fans below 1,000 ft. in elevation. Ranges from San Benito County to San Luis Obispo County. Blooms February – June.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Mud Nama (*Nama stenocarpa*)	CRPR 2B.2	Occurs in intermittently wet areas such as lake shores and riverbanks. Occurs sparingly in the Central Valley and more frequently in Southern California from sea level to below 1,640 feet. Blooms January-July.	**Absent.** Intermittently wet areas needed for the proliferation of this species are absent from the project site.
California Alkali Grass (*Puccinellia simplex*)	CRPR 1B.2	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley, San Francisco Bay area and western Mojave Desert; elevations below 3,000 feet. Blooms March-May.	**Absent.** Decades of agricultural disturbance would have eliminated any habitat that may have once been present on site or in the immediate vicinity.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CRPR 1B.2	Occurs in freshwater emergent marsh habitat in drainage ditches and canals of California's Central Valley. Blooms May to October.	**Absent.** Aquatic habitat needed to support this species is absent from the project site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence within the Project Site
Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimorphus*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** VELB distribution is no longer thought to include the San Joaquin Valley south of Merced County. Furthermore, blue elderberry shrubs required by this species are absent from the site.
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent**. Suitable habitat in the form of vernal pools is absent from the site and immediately surrounding lands.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Vernal pools of clear to turbid waters of the Central Valley measuring 54 sq.ft. to larger pools (largest known to be 89-acre Olcott Lake).	**Absent**. Suitable habitat in the form of vernal pools is absent from the site and immediately surrounding lands.
California Tiger Salamander-Central California DPS (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent**. The project site is situated in a matrix of urban and intensive agricultural lands within which this species would not have been able to persist. The aquatic features within the vicinity of the project site are unsuitable for this species' ecology. and there are no CNDDB occurrences within 10-miles of the project site (CDFW 2025).
Western Spadefoot (*Spea hammondii*)	FPT, CSC	Occurs in grasslands of San Joaquin Valley, where it breeds in vernal pools or other seasonal wetlands and aestivates in underground refugia such as rodent burrows. Baumberger et al. (2019) recorded a maximum distance of around 860 feet between breeding and aestivation sites.	**Absent.** The project site is situated in a matrix of urban and intensive agricultural lands within which this species would not have been able to persist.. The closest CNDDB occurrence is over 10 miles northeast of the project site (CDFW 2025).

TABLE 1. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence within the Project Site
Northwestern Pond Turtle (*Actinemys marmorata*)	FPT, CSC	Found in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires partially submerged rocks or logs for basking sites. Nesting takes place in open areas, on a variety of soil types, and up to ¼ mile away from water. Overwintering and summertime aestivation includes use of upland habitat, generally with leaf litter or other loose substrate for burying themselves.	**Unlikely.** The project site consists entirely of intensive agricultural lands that lack aquatic features and offer little to no upland habitat for this species; the latter is limited to marginal nesting habitat in the site's small strips of uncultivated border lands. Historical aerials of the remnant portions of Mussel Slough in the near project vicinity indicate that the slough is typically only inundated during periods of heavy precipitation, which would not be adequate to support this species. The surrounding upland habitat consists entirely of agricultural lands, which offer little to no suitable habitat for this species. Western pond turtles are known from the general area, having been documented in large numbers at the Hanford Wastewater Treatment Facility, approximately 2.5 miles southeast of the site (Germano 2010). Past that, the closest iNaturalist and CNDDB records of this species are approximately 7 miles northwest of the site in the Kings River and 7 miles southwest of the site in Mussel Slough, respectively. (iNaturalist 2025, CDFW 2025). Despite having some presence in the Hanford area, northwestern pond turtles are unlikely to be found on the project site for the reasons discussed here.
Blunt-Nosed Leopard Lizard (*Gambelia sila*)	FE, CE, FP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	**Absent.** Agricultural and urban development has eliminated any potential habitat from the project site and surrounding area. There are no CNDDB occurrences within the vicinity of the project site (CDFW 2025).
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Possible.** The project site contains foraging habitat in the form of an alfalfa field and a large eucalyptus tree that could feasibly support nesting by Swainson's hawks. Other trees within ¼ mile of the project site could also be used for nesting. This species is well-documented in the area; there are 14 CNDDB nesting occurrences within 10 miles of the site and over 70 eBird sightings within a 10-mile radius as well (CDFW 2025, eBird 2025).

TABLE 1. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence within the Project Site
Western Snowy Plover (*Charadrius nivosus nivosus*)	FT, CSC	A small shorebird that breeds on the Pacific and Gulf Coasts of the U.S. and Mexico and locally inland at various locations including the San Joaquin Valley. While much of the interior population overwinters on the coast, some San Joaquin Valley breeders remain year-round. Typical nesting habitat in the San Joaquin Valley includes barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, and braided river channels. Foraging habitat includes dry flats and areas near shallow water.	**Unlikely.** The western snowy plover is known from the general area, with eBird sightings at the Hanford Wastewater Treatment Facility, approximately 2.5 miles southeast of the site, and several other eBird records at ponds 5-6 miles southeast of site boundaries. The nearest CNDDB occurrence is approximately 9 miles southwest of the site at an evaporation pond system near Stratford. The site itself lacks suitable nesting and foraging habitat for the western snowy plover, and this species is not expected to occur here.
Burrowing Owl (*Athene cunicularia*)	CC, CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows. May occupy agricultural landscapes, utilizing burrows at field margins or on ditch banks or irrigation berms, and foraging in cropland.	**Unlikely.** The project site is situated in the outskirts of Hanford, in a matrix of anthropogenic uses generally not conducive to burrowing owl occupancy. LOA is not aware of any recent sightings of this species in the vicinity. Several eBird records are located between 5 and 7 miles from project boundaries, but all are from 2011 or prior. The closest CNDDB occurrence is a 2006 record mapped 9.5 miles northwest of the site. While the site's alfalfa field is theoretically suitable for foraging by this species, and the field margins theoretically suitable for roosting/nesting, landscape factors suggest a low probability of occurrence.
Tricolored Blackbird (*Agelaius tricolor*)	CT, CSC	Breeds colonially near fresh water in dense bulrush, cattails, thickets of willows or shrubs, and increasingly in wheat or triticale fields. Forages in grassland and cropland areas.	**Possible.** Tricolored blackbirds are not commonly documented in the project vicinity. The closest eBird records are 6.5-7 miles from project boundaries, and the closest CNDDB occurrence is over 10 miles away. Nevertheless, individuals of this species may pass through the area from time to time, in which case the site's alfalfa field may be used for foraging. The site does not provide nesting habitat for this species.
Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*)	FE, CE	Inhabits valley saltbrush scrub, valley sink scrub, and grassland habitats located from the Valley floor to 300 ft. in elevation.	**Absent.** Suitable habitat is absent from the project site, and the site is situated in a matrix of intensive agricultural and urban uses within which this species would not have been able to persist. There are no CNDDB occurrences in the vicinity (CDFW 2025).

TABLE 1. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS (cont'd)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	*Occurrence within the Project Site
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged ground squirrel burrows as denning habitat. May become adapted to urban environments, as has occurred in the cities of Bakersfield, Taft, and Coalinga. Cities with kit foxes are typically adjacent to natural habitat. Kit foxes have not be observed in cities that are completely surrounded by agricultural land (Cypher et al. 2012).	**Unlikely.** This species was historically known from the project vicinity. There are 17 CNDDB occurrences within 10 miles of the project site, including one 2006 occurrence 1.5 miles northeast from project boundaries. The 2006 occurrence is the most recent with the remaining occurrences dating from 2002 back. Urbanization since that time has reduced the suitability of the greater Hanford area, and the project vicinity, for this species. Based on aerial imagery, the nearest remaining blocks of open natural land are over 8 miles west of the site near the Kings River. While the site itself may theoretically provide some foraging and denning opportunities for this species, landscape factors suggest a very low probability of occurrence.

State Species of Special Concern

California Glossy Snake (*Arizona elegans occidentalis*)	CSC	A medium sized snake most common in desert regions with arid scrub, rocky washes, grasslands, and chaparral habitat. Primarily nocturnal. Hunts small vertebrates.	**Absent.** Suitable habitat is absent from the project site, and the site is situated in a matrix of intensive agricultural and urban uses within which this species would not have been able to persist. There are no CNDDB occurrences within 10 miles of the site (CDFW 2025).
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	CSC	Occurs primarily as a migrant and summer resident from April to early October; breeds mid-April to late July. Small numbers winter in southern Central Valley and the Imperial and Colorado River valleys. Requires deepwater marshes and wetlands with tall emergent vegetation such as tules or cattails for breeding.	**Possible.** This species is occasionally sighted in the project vicinity. There is a 2024 eBird record in Hanford's Hidden Valley Park, approximately 2.5 miles northeast of the site. Several other eBird records are located 4-5 miles southwest to southeast of the site. There is some potential for yellow-headed blackbirds to occasionally forage in the site's alfalfa field. Nesting habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Roosts in rocky outcrops, cliffs, and crevices with access to open habitats for foraging. May also roost in caves, mines, hollow trees and buildings.	**Possible.** The site provides suitable foraging habitat and potential roosting habitat in trees on the north end of the project site.

***OCCURRENCE DESIGNATIONS AND STATUS CODES**

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent: Species not observed on the Site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE Federally Endangered CE California Endangered

FT	Federally Threatened	CT	California Threatened
FPT	Federally Proposed Threatened	CSC	California Species of Special Concern
FC	Federal Candidate	CFP	California Fully Protected
		CC	California Candidate for Listing

CRPR CODES

1A	Plants Presumed Extinct in California	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

2.5 JURISDICTIONAL WATERS

Jurisdictional waters are those rivers, creeks, drainages, lakes, ponds, reservoirs, and wetlands that are subject to the authority of the USACE, CDFW, and/or the RWQCB. In general, the USACE regulates navigable waters, tributaries to navigable waters, and wetlands with a continuous surface connection to these waters, where wetlands are defined by the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. All waters under USACE jurisdiction are also regulated by the RWQCB as waters of the State. Additionally, the RWQCB asserts jurisdiction over certain isolated features disclaimed by the USACE. The CDFW has jurisdiction over waters that have a defined bed and bank. The regulation of jurisdictional waters is discussed in more detail in Section 3.2.8.

Aquatic features, including any potentially jurisdictional waters or wetlands, are absent from the project site.

2.6 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.0, the USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the project site and immediately surrounding lands.

2.7 CALIFORNIA SENSITIVE NATURAL COMMUNITIES

California contains a wide range of natural communities, or unique assemblages of plants and animals. These communities have largely been classified and mapped by CDFW as part of their Vegetation Classification and Mapping Program (VegCAMP). Natural communities are assigned

state and global ranks according to their rarity and the magnitude and trend of the threats they face. Any natural community with a state rank of 3 or lower (on a 1 to 5 scale) is considered "sensitive" and must be considered in CEQA review.

No habitats designated as a Sensitive Natural Community by CDFW or any other sensitive habitats are present on the site or surrounding lands.

2.8 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, rivers and creeks supporting riparian vegetation, and ridgelines.

The project site does not contain or adjoin any geographic features that could function as a wildlife movement corridor.

3.0 RELEVANT GOALS, POLICIES, AND LAWS

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

In California, any project carried out or approved by a public agency that will result in a direct or reasonably foreseeable indirect physical change in the environment must comply with CEQA. The purpose of CEQA is to ensure that a project's potential impacts on the environment are evaluated and methods for avoiding or reducing these impacts are considered before the project is allowed to move forward. A secondary aim of CEQA is to provide justification to the public for the approval of any projects involving significant impacts on the environment.

According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest." Although the lead agency may set its own CEQA significance thresholds, project impacts to biological resources are generally considered to be significant if they would meet any of the following criteria established in Appendix G of the CEQA Guidelines:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.
- 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.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) requires the lead agency to make "mandatory findings of significance" if there is substantial evidence that a project may:

- 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, or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Achieve short-term environmental goals to the detriment of long-term environmental goals.
- Produce environmental effects that are individually limited but cumulatively considerable, meaning that the incremental effects of the project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

3.2 OTHER RELEVANT LAWS AND POLICIES

3.2.1 General Plan Policies of the City of Hanford

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the City of Hanford General Plan. The City of Hanford General Plan was released in March 2014 and is valid through 2034. Implementation of goals in the general plan is accomplished via a set of policies specific to each goal.

Relevant biological resource goals of the City of Hanford General Plan can be found in Chapter 5: Open Space, Conservation, and Recreation; and are as follows:

- Preserve and enhance natural open space areas;
- Where feasible, establish permanent mechanisms to protect wetlands and riparian corridors;
- Identify and protect vernal pools;
- Avoid potential negative impacts of increased human activity on sensitive habitat areas when establishing new recreational facilities/programs;
- Ensure potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects;
- Manage or eliminate nonnative invasive species from City-owned property and open space;

- Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees in new developments;
- Encourage the planting of native trees and drought-tolerant vegetation;
- Establish programs in connection with environmental review process to protect endangered wildlife and their habitats;
- Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City

3.2.2 Threatened and Endangered Species

In California, imperiled plants and animals may be afforded special legal protections under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA). Species may be listed as "threatened" or "endangered" under one or both Acts, and/or as "rare" under CESA. Under both Acts, "endangered" means a species is in danger of extinction throughout all or a significant portion of its range, and "threatened" means a species is likely to become endangered within the foreseeable future. Under CESA, "rare" means a species may become endangered if their present environment worsens. Both Acts prohibit "take" of listed species, defined under CESA as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86), and more broadly defined under FESA to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). The USFWS commonly interprets "take" to include the loss of habitat utilized by a listed species.

When state and federally listed species have the potential to be impacted by a project, the USFWS and CDFW must be included in the CEQA process. These agencies review the environmental document to determine the adequacy of its treatment of endangered species issues and to make project-specific recommendations for the protection of listed species. Projects that may result in the "take" of listed species must generally enter into consultation with the USFWS and/or CDFW pursuant to FESA and CESA, respectively. In some cases, incidental take authorization(s) from these agencies may be required before the project can be implemented.

3.2.3 California Fully Protected Species

The classification of certain animal species as "fully protected" was the State of California's initial effort in the 1960s, prior to the passage of the California Endangered Species Act (CESA), to

identify and provide additional protection to those species that were rare or faced possible extinction. Following CESA enactment in 1970, many fully protected species were also listed as California threatened or endangered. The list of fully protected species are identified, and their protections stipulated, in California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and fish (5515). Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except in conjunction with necessary scientific research and protection of livestock.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs.

Native birds are also protected under California state law. The California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

3.2.5 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, 1992), which states that it is “unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFW.

3.2.6 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.2.7 Habitat Conservation Plans and Natural Community Conservation Plans

Section 10 of the federal Endangered Species Act establishes a process by which non-federal projects can obtain authorization to incidentally take listed species, provided take is minimized and thoroughly mitigated. A Habitat Conservation Plan (HCP), developed by the project applicant in collaboration with the USFWS and/or NMFS, ensures that such minimization and mitigation will occur, and is a prerequisite to the issuance of a federal incidental take permit. Similarly, a Natural Community Conservation Plan (NCCP), developed by the project applicant in collaboration with CDFW, provides for the conservation of biodiversity within a project area, and permits limited incidental take of state-listed species.

3.2.8 Wetlands and Other Jurisdictional Waters

Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into "navigable waters" (33 U.S.C. §1344), defined in the CWA as "the waters of the United States, including the territorial seas" (33 U.S.C. §1362(7)). The CWA does not supply a definition for waters of the U.S., and that has been the subject of considerable debate since the CWA's passage in 1972. A variety of regulatory definitions have been promulgated by the two federal agencies responsible for implementing the CWA, the Environmental Protection Agency (EPA) and USACE. These definitions have been interpreted, and in some cases, invalidated, by federal courts.

Waters of the U.S. are presently defined by the EPA and USACE's joint 2023 Revised Definition of 'Waters of the U.S.' Rule (2023 WOTUS Rule), issued in January 2023 and amended in August 2023. Generally speaking, waters of the U.S. include:

- Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide
- The territorial seas
- Interstate waters
- Impoundments of waters otherwise defined as waters of the United States under the definition
- Tributaries to other waters of the U.S. that are relatively permanent, standing or continuously flowing bodies of water
- Wetlands adjacent to other waters of the U.S. that have a continuous surface connection to those waters

The 2023 WOTUS Rule also defines a number of exclusions from the definition of waters of the U.S., many of which are longstanding exclusions from earlier regulatory regimes. These generally include:

- Waste treatment systems
- Prior converted cropland
- Ditches excavated wholly in and draining only dry land that do not carry a relatively permanent flow of water
- Certain artificial features, e.g. irrigation basins, swimming pools, borrow pits, and artificially irrigated areas
- Swales and erosional features characterized by low volume, infrequent, or short duration flow

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board (SWRCB) has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders.

Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining a Section 404 Clean Water Act permit. Discharges into waters of the State that are not also waters of the U.S. require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB.

The SWRCB and RWQCBs also administer the federal National Pollution Discharge Elimination System (NPDES) program, which is concerned with the discharge of stormwater and other pollutants into water bodies. Projects that disturb one or more acres of soil must obtain coverage under the SWRCB's current NPDES Construction Stormwater General Permit. A prerequisite for permit coverage is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Other types of pollutant discharges into waters of the U.S., such as wastewater, may require coverage under a different NPDES general permit, and in some cases an individual permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

4.0 IMPACTS AND MITIGATIONS

The project considered in this evaluation of impacts to biological resources is the conversion of 30.9 acres of agricultural lands to a residential subdivision. This analysis assumes that all areas of the site will experience permanent impacts from proposed development.

4.1 POTENTIALLY SIGNIFICANT PROJECT IMPACTS

4.1.2 Potential Project Impacts to the Swainson's Hawk

Potential Impacts: The Swainson's hawk, a state-listed species, is known to nest in the project vicinity. A suitable nesting tree is present on the north edge of the project site and many more exist within ¼ mile of the project site. Alfalfa fields, a preferred foraging habitat for Swainson's hawk, comprise the majority of the project site. The presence of a preferred foraging habitat increases the likelihood that trees within the vicinity of the project site could be utilized by Swainson's hawks for nesting.

If Swainson's hawks are nesting on or near the project site at the time of construction, individual hawks could be injured, killed, or disturbed such that they would abandon their nest. Project activities that adversely affect the nesting success or result in mortality of Swainson's hawks would violate state and federal laws and would be considered a significant impact under CEQA.

The project site provides high quality foraging habitat in the form of approximately 30 acres of alfalfa field, all slated for permanent development. While the loss of this area may cause any Swainson's hawks that currently forage on site to shift their foraging patterns to other agricultural fields, at present there appears to be sufficient alternative habitat in the immediate vicinity, and many square miles of alternative habitat in rural areas surrounding Hanford. Swainson's hawks have large foraging ranges; Estep (1989) calculated an average size of 6,820 acres for his study population in Central Valley. Given the wide-ranging foraging habits of this species and the relative abundance of similar agricultural fields in the general vicinity, loss of foraging habitat for the Swainson's hawk is not considered a significant impact of the project under CEQA.

Mitigation. The following mitigation measures will be implemented for the protection of nesting Swainson's hawks.

Measure 4.1.1a (Construction Timing). To avoid impacts to nesting Swainson's hawks, construction activities will occur, where possible, outside the March 1-September 15 nesting season.

***Mitigation 4.1.1b* (*Pre-construction Surveys*).** If the project must be constructed between March 1 and September 15, a qualified biologist will conduct six pre-construction surveys within ¼ of the project site across a minimum of two survey periods as outlined in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (SHTAC 2000).

***Mitigation 4.1.1c* (*Establish Buffers*).** Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged.

***Mitigation 4.1.1d* (*Monitor Nest*).** Should construction activity be necessary within the designated buffer around an active Swainson's hawk nest, a qualified biologist will monitor the nest daily for one week, and thereafter once a week, for the duration of the activity or until the nest is no longer active, whichever comes first. Should construction activity within the buffer change such that a higher level of disturbance will be generated, monitoring will occur daily for one week and then resume the once-a-week regime. If, at any time, the biologist determines that construction activity may be compromising nesting success, construction activity within the designated buffer will be altered or suspended until the biologist determines that there is no more potential to compromise success of the nest.

Implementation of the above measures will reduce potential project impacts to Swainson's hawks to a less than significant level under CEQA and facilitate compliance with state and federal laws.

4.1.2 Potential Project Impacts to Other Nesting Raptors and Migratory Birds

Potential Impacts. The project site is likely to support nesting by various birds and raptors protected by the Migratory Bird Treaty Act and related state laws. For example, the alfalfa field could be used by ground- or vegetation-nesting birds such as the mourning dove and western meadowlark, and the trees could be used by American robins, American crows, and northern mockingbirds, among other species. If project construction takes place during the nesting season, birds nesting on site could be injured or killed by construction activities, while birds nesting near the site could be disturbed such that they would abandon their nests. Construction-related mortality of nesting birds and disturbance leading to nest abandonment would violate state and federal laws and constitute a significant impact of the project.

Mitigation. The following measures will be implemented for the protection of nesting birds and raptors.

> ***Mitigation Measure 4.1.2a (Construction Timing).*** If feasible, future construction activities will take place entirely outside of the avian nesting season, defined as February 1 to August 31.
>
> ***Mitigation Measure 4.1.2b (Preconstruction Surveys*).** If construction must occur between February 1 and August 31, a qualified biologist will conduct surveys for active bird nests within 7 days prior to the start of work during this period. The survey area will encompass the site and surrounding lands within 500 feet for nesting raptors and 250 feet for other nesting birds.
>
> ***Mitigation Measure 4.1.2c (Avoidance of Active Nests*).** Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.

Implementation of the above measures will reduce potential project impacts to nesting birds and raptors to a less than significant level under CEQA and facilitate compliance with state and federal laws protecting these species.

4.1.3 Potential Project Impacts to Roosting Bats Including Pallid Bat

Potential Impacts. The project site's mature trees have the potential to be used for roosting by various bat species, possibly including the pallid bat (*Antrozous pallidus*), a California Species of Special Concern. It is assumed that the trees will be removed to accommodate residential construction. Any bats roosting in the trees at the time of removal are likely to be injured or killed. Construction-related injury or mortality of the pallid bat, or mortality of a significant number of bats associated with a roost sight or maternal roost is considered a potentially significant impact of the project.

The project will not result in a significant loss of foraging habitat for the pallid bat. Although potential roost sites will be removed, other mature trees will remain available elsewhere in the project vicinity. The site does not offer unique foraging habitat for bats, nor is it likely to represent an important part of any individual foraging range, given its disturbed nature and urban setting. Similar and higher quality foraging habitats are abundant in the project vicinity and elsewhere in the region.

Mitigation. The following measures will be implemented for the protection of roosting bats including pallid bats.

> ***Mitigation 4.1.3a* (*Construction Timing*).** If feasible, demolition and removal of the mature trees will occur outside of the period between April 15 and September 30. This is the time frame within which colony-nesting bats in the vicinity generally assemble, give birth, nurse their young, and ultimately disperse.
>
> ***Mitigation 4.1.3b* (*Pre-construction Surveys*).** Within 10 days prior to the removal of the site's trees, a qualified biologist will survey them for roosting bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites.
>
> ***Mitigation 4.1.3c* (*Avoidance of Maternity Roosts*).** Should any active maternity roosts be discovered, the biologist will identify a suitable construction-free buffer around the maternity roost. The buffer will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the nursery is no longer active.
>
> ***Mitigation 4.1.3d* (*Humane Eviction of Non-breeding Bats*).** If a non-breeding bat colony is found in tree cavities, the individuals will be humanely evicted, under the direction of a qualified biologist, to ensure that bats are not physically harmed by removal of the trees.

Implementation of the above measures will reduce potential construction-related impacts to the roosting bats including pallid bat to a less than significant level.

4.2 LESS THAN SIGNIFICANT PROJECT IMPACTS

4.2.1 Potential Project Impacts to Special Status Plants

Potential Impacts. Ten (10) special status plant species have been documented in the project vicinity (see Table 1). All ten species are considered absent from the project site due to an absence of suitable habitat and/or soils, the site's being situated outside of the species' distribution, or a combination thereof. Therefore, impacts to special status plants are considered less than significant under CEQA.

Mitigation. Mitigation measures are not warranted.

4.2.2 Potential Project Impacts to Special Status Animal Species Absent from or Unlikely to Occur Within the Project Site

Potential Impacts. Of the sixteen (16) special status animal species that potentially occur in the general vicinity of the site, twelve are considered absent from or unlikely to occur within the project site due to the absence of suitable habitat and/or the project site being situated outside of the species' known distribution (see Table 1). These comprise the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondii*), northwestern pond turtle (*Actinemys marmorata*), blunt-nosed leopard lizard (*Gambelia sila*), California glossy snake (*Arizona elegans occidentalis*), burrowing owl (*Athene cunicularia*), western snowy plover (*Anarhynchus nivosus nivosus*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), and San Joaquin kit fox (*Vulpes macrotis mutica*). The project is expected to have an insignificant effect or no effect on these species through construction mortality/disturbance or loss of habitat because there is little or no likelihood that they are present.

Mitigation. Mitigation is not warranted.

4.2.3 Project Impacts to Special Status Animal Species that Would Use the Site for Non-Sensitive Activities Only

Potential Impacts. Two special status animal species, the tricolored blackbird (*Agelaius tricolor*) and yellow-headed blackbird (*Xanthocephalus xanthocephalus*), have the potential to pass through or forage on the site from time to time but would not nest on or near enough to the site that they could be vulnerable to construction-related disturbance or reproductive failure (see Table 1). Individuals of this species are unlikely to be injured or killed by construction activities because they are highly mobile while foraging and would be expected to simply avoid active work areas.

The project would not adversely affect these species through loss of foraging habitat. The site does not offer unique foraging habitat for these species, nor is it likely to represent an important part of their foraging range, given its disturbed nature and urban setting. Similar and higher quality foraging habitats are abundant in the project vicinity and elsewhere in the region.

Mitigation. Mitigation is not warranted.

4.2.4 Potential Project Impacts to Jurisdictional Waters

Potential Impacts. As discussed, the project site does not contain any aquatic features, and no impacts to the adjoining portion of Mussel Slough or any other off-site aquatic resources are anticipated.

Mitigation. Mitigation is not warranted.

4.2.5 Potential Project Impacts to Wildlife Movement Corridors

Potential Impacts. The project site does not contain or adjoin any geographic features that could function as a wildlife movement corridor. Therefore, the project will have no impact on wildlife movement corridors.

Mitigation. Mitigation is not warranted.

4.2.6 Project Impacts to Sensitive Natural Communities and Designated Critical Habitat

Potential Impacts. Sensitive Natural Communities and Designated Critical Habitat are absent from the project site and surrounding lands. Project development would have no impact on Sensitive Natural Communities or Designated Critical Habitat.

Mitigation. No mitigation is warranted.

4.2.7 Consistency with Local Policies and Ordinances

Potential Impacts. The project appears consistent with the City of Hanford General Plan policies related to biological resources.

Mitigation. Mitigation measures are not warranted.

4.2.8 Consistency with Habitat Conservation Plans and Natural Community Conservation Plans

Potential Impacts. There are no known HCPs or NCCPs that would apply to the project.

Mitigation. Mitigation measures are not warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

APPENDIX A
VASCULAR PLANTS OF THE PROJECT SITE

The plant species listed below were observed on the project site during LOA's May 7, 2025 surveys. The wetland indicator status of each plant, derived from the USACE-administered National Wetland Plant List for the Arid West Region, has been shown following its common name if available.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland

AMARANTHACEAE – Amaranth Family		
Amaranthus blitoides	Procumbent Pigweed	FACU
Amaranthus retroflexus	Redroot Amaranth	FACU
Atriplex lentiformis	Big Saltbrush	FACU
Centromadia pungens	Common Spikeweed	FAC
Cotula australis	Australian Buttonweed	FAC
ANACARDIACEAE – Cashew Family		
Pistacia chinensis	Chinese Pistache	UPL
Schinus molle	Peruvian Peppertree	FACU
ASTERACEAE – Sunflower Family		
Erigeron bonariensis	Flaxleaf Fleabane	FACU
Erigeron canadensis	Canada Fleabane	FACU
Helianthus annuus	Common Sunflower	FACU
Lactuca serriola	Prickly Lettuce	FACU
Matricaria discoidea	Pineapple Weed	FACU
Sonchus asper	Spiny Sowthistle	FAC
BORAGINACEAE – Borage Family		
Amsinckia spp.	Fiddleneck	FACU
Heliotropium curassavicum	Salt Heliotrope	FACU
BRASSICACEAE – Mustard Family		
Capsella bursa-pastoris	Shepherd's Purse	FACU
Hirschfeldia incana	Shortpod Mustard	UPL
Sisymbrium irio	London Rocket	UPL
CHENOPODIACEAE—Goosefoot Family		
Salsola tragus	Russian Thistle	FACU
FABACEAE – Legume Family		
Acmispon americanus	Spanish Clover	UPL
Medicago sativa	Alfalfa	UPL
Melilotus indicus	Annual Sweet Clover	FACU
GERANIACEAE – Geranium Family		
Erodium cicutarium	Redstem Filaree	UPL

MALVACEAE – Mallow Family		
Malva parviflora	Cheeseweed	UPL
MYRTACEAE – Myrtle Family		
Eucalyptus camaldulensis	Red River Eucalyptus	FAC
POACEAE – Grass Family		
Avena spp.	Oat	FAC
Bromus catharticus	Rescuegrass	UPL
Bromus diandrus	Ripgut Brome	UPL
Digitaria sanguinalis	Crabgrass	FACU
Echinochloa crus-galli	Barnyard Grass	FACW
Hordeum murinum	Foxtail Barley	FACU
Poa annua	Annual Bluegrass	FAC
Taeniatherum caput-medusae	Medusahead	UPL
Triticum aestivum	Common Wheat	UPL
SOLANACEAE – Nightshade Family		
Datura wrightii	Sacred Datura	UPL
Nicotiana glauca	Tree Tobacco	FAC
Solanum elaegnifolium	Silverleaf Nightshade	UPL
URTICACEAE – Nettle Family		
Urtica urens	Dwarf Nettle	UPL
ZYGOPHYLLACEAE – Caltrops Family		
Tribulus terrestris	Punctureveine	UPL

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES POTENTIALLY OCCURRING ON THE PROJECT SITE

APPENDIX B
TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

The species listed below are those that may be expected to routinely and predictably use or pass through the project site during some or all of the year. An asterisk denotes a species observed on or immediately adjacent to the site during surveys conducted by LOA on May 7, 2025.

CLASS: AMPHIBIA
ORDER: ANURA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and Relatives)
Pacific Tree Frog (*Pseudacris regilla*)

CLASS: REPTILIA
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Side-blotched Lizard (*Uta stansburiana*)
Western Fence Lizard (*Sceloporus occidentalis*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Pacific Gopher Snake (*Pituophis catenifer catenifer*)
Common Kingsnake (*Lampropeltis californiae*)
Valley Gartersnake (*Thamnophis sirtalis fitchi*)
FAMILY: VIPERIDAE (Vipers)
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES
ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)
FAMILY: CATHARTIDAE (New World Vultures)
Turkey Vulture (*Cathartes aura*)
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
Cooper's Hawk (*Accipiter cooperi*)
*Red-tailed Hawk (*Buteo jamaicensis*)
ORDER: CHARADRIIFORMES (Shorebirds)
FAMILY: CHARADRIIDAE (Plovers, Dotterels, and Lapwings)
Killdeer (*Charadrius vociferus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Pigeon (*Columba livia*)
*Mourning Dove (*Zenaida macroura*)
Eurasian Collared Dove (*Streptopelia decaocto*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)

Barn Owl (*Tyto alba*)

ORDER: PASSERIFORMES (Perching Birds)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)

Black Phoebe (*Sayornis nigricans*)

*Western Kingbird (*Tyrannus verticalis*)

FAMILY: CORVIDAE (Jays, Magpies, and Crows)

California Scrub Jay (*Aphelocoma coerulescens*)

American Crow (*Corvus brachyrhynchos*)

Common Raven (*Corvus corax*)

FAMILY: HIRUNDINIDAE (Swallows)

Cliff Swallow (*Petrochelidon pyrrhonota*)

*Barn Swallow (*Hirundo rustica*)

FAMILY: AEGITHALIDAE (Bushtits)

Bushtit (*Psaltriparus minimus*)

FAMILY: REGULIDAE (Kinglets)

Ruby-crowned Kinglet (*Corthylio calendula*)

FAMILY: TURDIDAE (Thrushes)

Western Bluebird (*Sialia mexicana*)

American Robin (*Turdus migratorius*)

FAMILY: MIMIDAE (Mockingbirds and Thrashers)

*Northern Mockingbird (*Mimus polyglottos*)

FAMILY: MOTACILLIDAE (Wagtails, Longclaws, and Pipits)

American Pipit (*Anthus rubescens*)

FAMILY: PARULIDAE (Wood Warblers and Relatives)

Yellow-rumped Warbler (*Dendroica coronata*)

FAMILY: STURNIDAE (Starlings and Allies)

*****European Starling (*Sturnus vulgaris*)

FAMILY: EMBERIZIDAE (Sparrows)

White-crowned Sparrow (*Zonotrichia leucophrys*)

FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)

Western Meadowlark (*Sturnella neglecta*)

*Red-winged Blackbird (*Agelaius phoeniceus*)

Great-tailed Grackle (*Quiscalus mexicanus*)

Brewer's Blackbird (*Euphagus cyanocephalus*)

Brown-headed Cowbird (*Molothrus ater*)

Bullock's Oriole (*Icterus bullock*)

FAMILY: FRINGILLIDAE (Finches)

*House Finch (*Carpodacus mexicanus*)

Lesser Goldfinch (*Carduelis psaltria*)

FAMILY: PASSERIDAE (Old World Sparrows)

House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: CHIROPTERA (Bats)

FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)
Yuma Myotis (*Myotis yumanensis*)
California Myotis (*Myotis californicus*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
FAMILY: MOLOSSIDAE (Free-tailed Bat)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
Audubon's Cottontail (*Sylvilagus audubonii*)
ORDER: RODENTIA (Rodents)
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
*California Ground Squirrel (*Otospermophilus beecheyi*)
FAMILY: GEOMYIDAE (Pocket Gophers)
Botta's Pocket Gopher (*Thomomys bottae*)
FAMILY: MURIDAE (Mice, Rats and Voles)
Western Harvest Mouse (*Reithrodontomys megalotis*)
Deer Mouse (*Peromyscus maniculatus*)
Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
California Vole (*Microtus californicus*)
ORDER: CARNIVORA (Carnivores)
FAMILY: CANIDAE (Foxes, Wolves, and Relatives)
Red Fox (*Vulpes vulpes*)
Coyote (*Canis latrans*)
*Domestic Dog (*Canis familiaris*)
FAMILY: PROCYONIDAE (Raccoons and Relatives)
*Raccoon (*Procyon lotor*)
FAMILY: MUSTELIDAE (Weasels and Relatives)
Striped Skunk (*Mephitis mephitis*)
FAMILY: FELIDAE (Cats)
Feral Cat (*Felis catus*)

APPENDIX C:

SELECT PHOTOGRAPHS OF THE PROJECT SITE



Photo 1: Representative photo of alfalfa field that comprises the majority of the project site.



Photo 2: Looking north from between two alfalfa fields. Northern edge of project site with large trees in background.



Photo 3: Looking southwest from the southeast corner of the project site.



Photo 4: Looking north from the southeast corner of the project site.



Photo 5: Looking south from the northeast edge of the project site.



Photo 6: Trees on northern edge of the project site.



Photo 7: Facing east on south edge of project site. Excavated remnant portion of Mussel Slough shown on the right.



Photo 8: Facing west on south edge of project site. Excavated remnant portion of Mussel Slough shown on the left.

Appendix C

Cultural Study

Cultural Resources Assessment for the Millenium Estates Tentative Subdivision Map Project, Kings County, California

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May 2025

USGS Hanford 7.5' topographic quadrangle;
40 total project acres; 40 acres surveyed
Keywords: Negative findings

MANAGEMENT SUMMARY

Taylored Archaeology completed a Phase I Cultural Resources Assessment for Millenium Estates Tentative Subdivision Map Project (Project). The Project consists of a 40-acre property on the west side of the City of Hanford in Kings County, California approximately 0.18 miles south of the intersection of West Lacey Boulevard and 12 ½ Avenue. The proposed Project includes the development of 211 single-family homes. The Project is subject to the California Environmental Quality Act (CEQA).

This Phase I Cultural Resources Assessment in compliance with CEQA requirements, entails (1) a records search from the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), (2) archival research, (3) a search of the Native American Heritage Commission's (NAHC) Sacred Lands File, and (4) an archaeological pedestrian survey of the Project boundary.

The SSJVIC records search results indicated that there have been six previous cultural resources investigations conducted, and no archaeological resources recorded, within the Project site. The SSJVIC also reported that there were 10 previous cultural resources investigations conducted within a 0.5-mile radius of the surrounding area and three cultural resources recorded. Three cultural resources were documented within a 0.5-mile radius of the Project: 1) the historic-era Southern Pacific Railroad (P-16-000122), 2) the historic-era Last Chance Ditch (P-16-000128), and 3) a historical archaeological site (P-16-000068) of scattered historical debris along a partially covered irrigation ditch. None of these resources overlap with the Project site nor will they be impacted by the proposed Project. An examination of historic topographic maps and aerial images indicated that the Project site has largely been used for agricultural purposes. The NAHC's SLF search results were negative.

No cultural resources were identified on the ground surface during the pedestrian survey.

Based on the results of this investigation, Taylored Archaeology recommends the following best management practices be implemented during Project construction:

- If unidentified archaeological resources are encountered during ground disturbing activities in the Project boundary, all work shall be temporarily halted in the immediate vicinity (100 feet) until a qualified archaeologist can identify the discovery and assess its significance.

- If human remains are uncovered during construction, the Kings County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded

an opportunity to make recommendations regarding the treatment and disposition of the remains.

A copy of this report will be provided to the SSJVIC for inclusion in the CHRIS database.

CONTENTS

1 INTRODUCTION 1
1.1 PROJECT DESCRIPTION AND LOCATION 1
1.2 REGULATORY SETTING 1
1.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT 2
1.3 PROFESSIONAL QUALIFICATIONS 2
1.4 REPORT ORGANIZATION 6

2 PROJECT SETTING 7
2.1 NATURAL ENVIRONMENT 7
2.2 PREHISTORIC SETTING 8
2.3 ETHNOGRAPHY 9
2.4 HISTORIC SETTING 10
2.4.1 California History 10
2.4.2 Central California History 11
2.4.3 Local History 11

3 METHODS 14
3.1 RECORDS SEARCH 14
3.2 ARCHIVAL RESEARCH 14
3.3 NAHC SACRED LANDS FILE 14
3.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY 14

4 RESULTS 16
4.1 RECORDS SEARCH 16
4.2 ARCHIVAL RESEARCH 18
4.3 NAHC SACRED LANDS FILE RESULTS 18
4.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY RESULTS 18

5 CONCLUSIONS AND RECOMMENDATIONS 23

6 REFERENCES 24

APPENDICIES

A Personnel Qualifications
B Records Search Results
C Sacred Lands File Search Results

FIGURES

Figure 1-1 Project vicinity in Kings County, California. 3
Figure 1-2 Project location on the Hanford, CA 7.5-minute quadrangle. 4
Figure 1-3 Aerial view of the Project boundary 5
Figure 2-1 Map of Tulare Lake with receding shoreline, 1854 to 1898. Red arrow shows approximate Project location (Lee 1898). 13
Figure 4-1 Overview of central portion of Project site, facing south. 19
Figure 4-2 Ground visibility in northeast portion of Project site, facing east. 20
Figure 4-3 Basin on south end of Project site, facing east. 20
Figure 4-4 Disturbed area in southwest portion of Project site, facing west. 21
Figure 4-5 Survey coverage of Project site. 22

TABLES

Table 4-1 Previous Cultural Resources Studies within the Project Area 16
Table 4-2 Previous Cultural Resources Studies within 0.5-mile radius of the Project Area. 17
Table 4-3 Previous Recorded Cultural Resources within 0.5-mile radius of the Project Area 18

1
INTRODUCTION

Taylored Archaeology performed a Phase I cultural resource assessment for the Millenium Estates Tentative Subdivision Map Project (Project) in the City of Hanford, Kings County, California (Figure 1). As part of the development approval process, the City of Hanford as the lead agency must comply with the California Environmental Quality Act (CEQA). The California Public Resources Code (PRC) 21000 (g) mandates that government agencies identify and mitigate the impacts of a project on the environment, including cultural resources.

1.1 PROJECT DESCRIPTION AND LOCATION

The Project proposes to develop a 211-unit single-family residential subdivision on an approximately 40-acre property. The Project site will be connected to 12 ½ Avenue to the east and be bisected by Millenium Way. The site will also have local streets within the subdivision and connect to future developments to the north and west. Types of improvements will include local residential streets, curbs, gutters, sidewalks, landscaping, and streetlights throughout the subdivision. A temporary storm basin may be constructed southwest of the Project site, if required for construction stormwater control. The Project site is comprised of Assessor's Parcel Number 011-010-010.

The Project site is located on the west side of the City of Hanford along 12 ½ Avenue approximately 0.18 miles south of the intersection of West Lacey Boulevard and 12 ½ Avenue. The Project lies in the northwest quarter of Section 34 of Township 18 South, Range 21 East, Mount Diablo Base Line and Meridian of the Hanford, California 7.5-minute USGS quadrangle.

1.2 REGULATORY SETTING

In this report "cultural resources" are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 36 Code of Federal Regulations (CFR) §60.4, "historical" in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local level in a local register of historical resources, at the state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed "historic properties".

1.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to CEQA, a historical resource is a resource listed in, or determined to be eligible for listing in, the CRHR. Historical resources may include, but are not limited to, "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant" (PRC §5020.1[j]). In addition, a resource included in a local register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

CEQA details appropriate measures for the evaluation and protection of cultural resources in §15064.5 of the CEQA Guidelines. According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the CRHR includes the following:

> *(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*
> *(B) Is associated with the lives of persons important in our past.*
> *(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*
> *(D) Has yielded, or may be likely to yield, information important in prehistory or history.*

According to CEQA guidelines §21074 (a)(1), criteria for tribal cultural resources includes the following:

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

Protection of cultural resources within California is additionally regulated by PRC §5097.5, which prohibits destruction, defacing, or removal of any historic or prehistoric cultural features on land under the jurisdiction of State or local authorities.

1.3 PROFESSIONAL QUALIFICATIONS

Archaeologist Consuelo Y. Sauls (M.A.), a Registered Professional Archaeologist (RPA 41591505), managed the assessment and authored this report for the Project. Ms. Sauls also conducted the records search and literature review, requested a Sacred Lands File search, and performed the pedestrian field survey of the Project site. Ms. Sauls meets the Secretary of the Interior's Standards for Professional Qualifications in Archaeology. Statement of Qualifications for key personnel is provided in Appendix A.

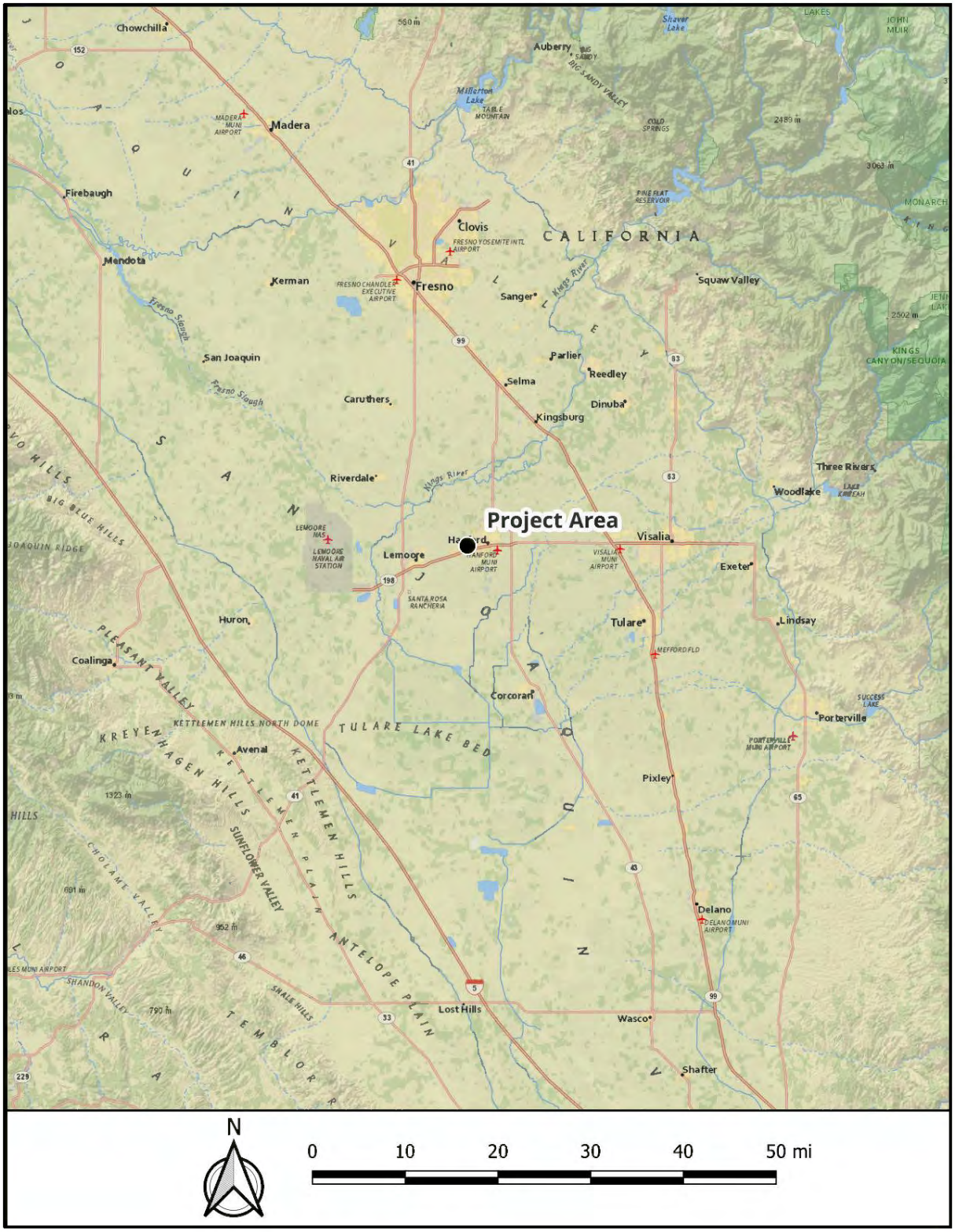


Figure 1-1 Project vicinity in Kings County, California.

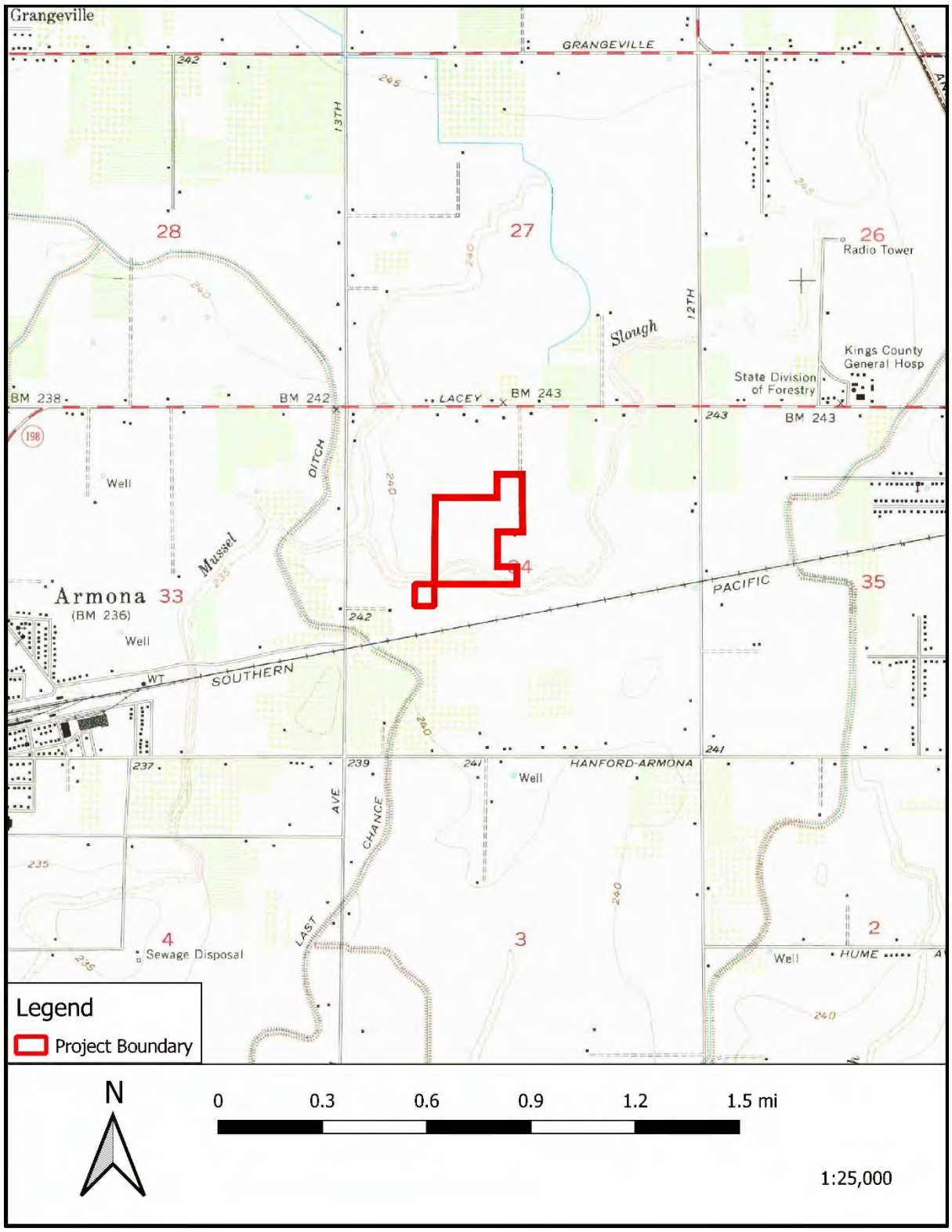


Figure 1-2 Project location on the Hanford, CA 7.5-minute quadrangle.

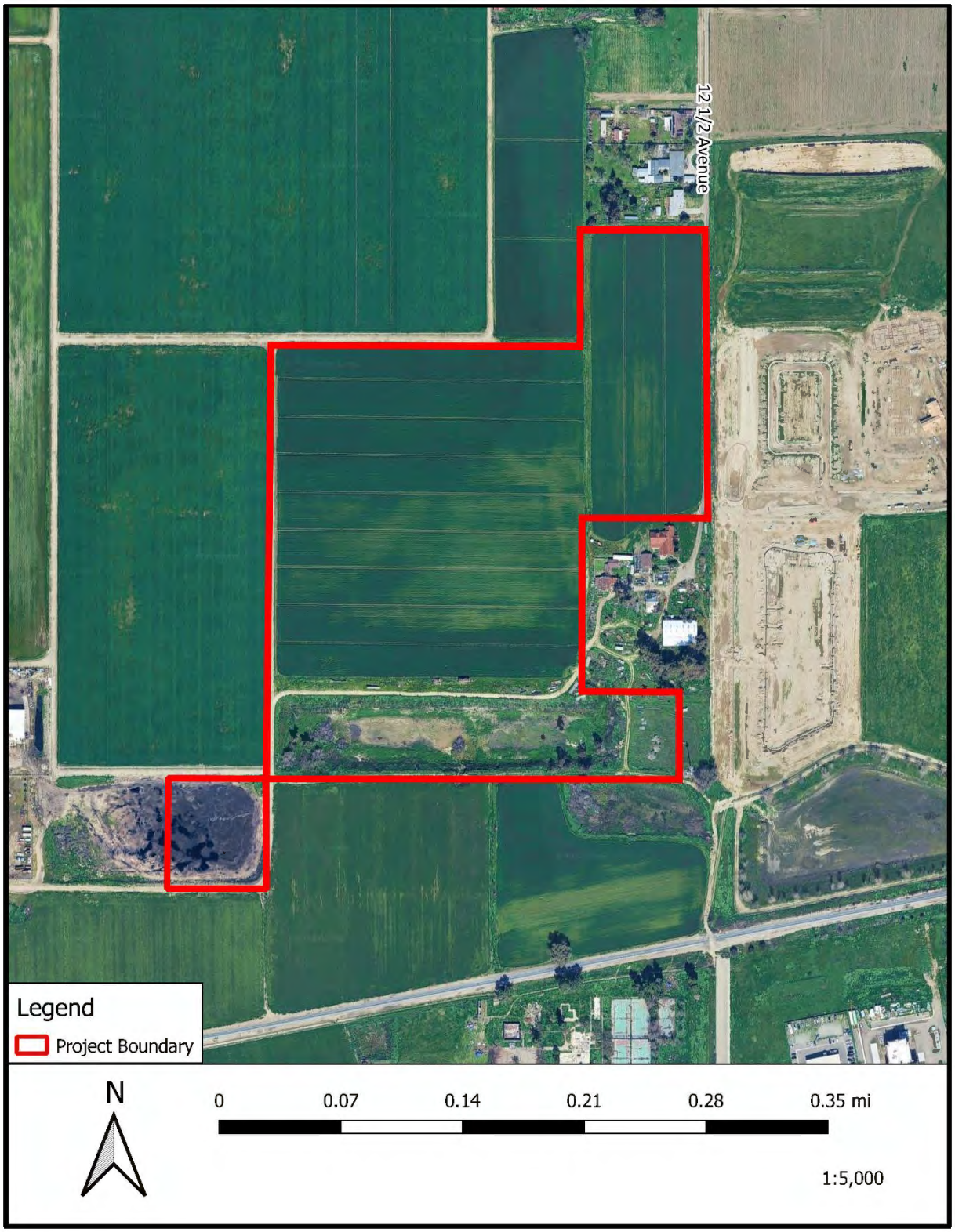


Figure 1-3 Aerial view of the Project boundary

1.4 REPORT ORGANIZATION

This report documents the results of a cultural resource assessment of the proposed Project area. In order to assess potential Project impacts to archaeological and historical resources pursuant to CCR §15064.5, the following specific tasks were completed: (1) requesting a records search from the Southern San Joaquin Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), at California State University, Bakersfield; (2) requesting a Sacred Lands File Search from the Native American Heritage Commission (NAHC); (3) conducting an archaeological pedestrian survey, and (4) preparing this technical report.

Taylored Archaeology prepared this report following the California Office of Historic Preservation standards in the 1990 Archaeological Resources Management Report Recommended Contents and Format. Chapter 1 describes the introduction of the Project and its location, the state regulations, and identifies the key personnel involved in this report. Chapter 2 is a literature review that summarizes the Project setting, including the natural, prehistoric ethnography, and historic background for the Project area and surrounding area. Chapter 3 details the methods used for cultural records searches, archival research, and archaeological pedestrian survey. Chapter 4 summarizes the results of the cultural resource investigation. Chapter 5 discusses the Project results and offers management recommendations. Chapter 6 is a bibliography of references cited within this report. The report also contains the following appendices: qualifications of key personnel (Appendix A), the CHRIS records search results (Appendix B), and Native American Heritage Center Sacred Lands File Search (Appendix C).

2
PROJECT SETTING

2.1 NATURAL ENVIRONMENT

The Project site lies in the Central Valley of California, which is approximately 450 miles from north to south and ranges in width east to west from 40 to 60 miles (Prothero 2017). The Central Valley is divided into two subunits, the Sacramento Valley in the north and the San Joaquin Valley in the south, which are each named after the primary rivers within each valley (Madden 2020). The Project is located approximately 225 feet above sea level on the open flat plains of the Southern San Joaquin Valley. Climate within the San Joaquin Valley is classified as a 'hot Mediterranean climate', with hot and dry summers, and cool damp winters characterized by periods of dense fog known as 'tule fog' (Prothero 2017).

The San Joaquin Valley is a comprised of a structural trough created approximately 65 million years ago and is filled with nearly 6 miles of sediment (Bull 1964). The San Joaquin Valley ranges from Stockton and the San Joaquin-Sacramento River Delta in the north to Wheeler Ridge to the south, ranging nearly sixty miles wide at its widest (Zack 2017). It is split by late Pleistocene alluvial fans between the San Joaquin River hydrologic area in the north and the Tulare Lake Drainage Basin in the south (Rosenthal et al 2007). The Project site is located within the latter of the two hydrologic units. The Kaweah, Tule, Kern, and Kings rivers flowed into large inland lakes with no outflow except in high flood events, in which the lakes would flow from through the Fresno Slough into the San Joaquin River. The largest of these inland lakes was Tulare Lake, which occupied a vast area of Tulare and Kings Counties and was the largest freshwater lake west of the Mississippi. These four tributary rivers accounted for more than 95 percent of water discharged into Tulare Lake, with the remaining five percent sourced from small drainages originating in the Coast Ranges to the west (Adams et al. 2015).

The valley floor of the region was largely dominated by marshlands, lakes, and annual grasslands. Historically, these habitats provided a lush environment for large animals, including various migratory birds and other waterfowl, grizzly bear (*Ursus arctos californicus*), tule elk (*Cervus* sp.), pronghorn (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), and mountain lion (*Puma concolor*) (Preston 1981). Native trees and plants observed in the Project vicinity include various blue, live, and white oaks (*Quercus* sp.), cottonwood (*Populus aegiros*), and willow (*Salix* sp.). The introduction of agriculture to the region resulted in large animals being forced out of their habitat. Common land mammals now include valley coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), kit fox (*Vulpes macrotis*), and rabbits (*Leporidae*). Rivers and lakes throughout the valley provide habitat for freshwater fish, including rainbow trout (*Oncorhynchus mykiss*), Sacramento sucker (*Catostomidae* sp.), and Sacramento perch (*Archoplites interruptus*) (Preston 1981).

2.2 PREHISTORIC SETTING

Archaeologists develop models of prehistoric resource chronologies and descriptions of lifestyles based on data collected at archaeological sites they investigate to better understand the past. Models of prehistoric life patterns are developed from both archaeological and ethnographic research. Archaeological studies in the San Joaquin Valley began in the early 1900s with several archaeological investigations (Rosenthal et al. 2007). The Southern San Joaquin Valley is of one of the least understood areas within California due to a lack of well-grounded chronologies for large segments of the valley (Rosenthal et al. 2007). This is largely due to the valley floor being filled with thick alluvial deposits, and from human activity largely disturbing much of the valley floor due to a century and a half of agricultural use (Dillon 2002; Siefken 1999). Mound sites may have occurred as frequently as one every two or three miles along major waterways but studying such mounded occupations sites is difficult as most surface sites have been destroyed (Schenck and Dawson 1929). Much of the early to middle Holocene archaeological sites may be buried as deep as 10 meters due to millennia of erosion and alluvial deposits from the western Sierras (Moratto 1984).

Mass agricultural development has heavily disturbed and changed the landscape of the Southern San Joaquin Valley, from the draining of marshes and the vanishing of the extensive Tulare Lake, to grading nearly the entire valley for agricultural operations (Garone 2011). These activities have impacted or scattered much of the shallow surface deposits and mounds throughout the valley (Rosenthal et al 2007). Some researchers have suggested that potentially as much as 90 percent of all Central California archaeological sites have been destroyed from these activities (Riddell 2002).

The cultural traits and chronologies which are summarized below are largely based upon information discussed in multiple sources, including Bennyhoff and Fredrickson (1994) and Fredrickson (1973, 1974), Garfinkel (2015), McGuire and Garfinkel (1980), Moratto (1984), and Rosenthal et al. (2007). The most recent comprehensive approach to compiling a chronology of the Southern San Joaquin Valley prehistory is by Garfinkel in 2015, which builds off Rosenthal's 2007 previous work. Both Garfinkel's and Rosenthal's chronologies are calculated in years B.C. In the interest of maintaining cohesiveness with modern anthropological research, the dates of these chronologies have been adapted into years before present (B.P.).

The Paleo-Indian Period (13,500-10,600 cal B.P.) was largely represented by ephemeral lake sites which were characterized by atlatl and spear projectile points. Around 14,000 years ago, California was largely a cooler and wetter place, but with the retreat of continental Pleistocene glaciers, California experienced a warming and drying period. Lakes filled with glacial meltwater were in the valley floor and used by populations of now extinct large game animals. A few prehistoric sites were discovered near the southwestern shore of Tulare Lake (Garfinkel 2015). Foragers appear to have operated in small groups which migrated on a regular basis.

During the Lower Archaic Period (10,500-7450 cal B.P.), climate change created a largely different environment which led to the creation of larger alluvial fans and flood plains. Most of the archaeological records of the prior period wound up being buried by geological processes. During

this time, cultural patterns appear to have emerged between the foothill and valley populations of the local people. The foothill sites were often categorized by dense flaked and ground stone assemblages, while the valley sites were instead characterized by a predominance of crescents and stemmed projectile points. Occupation within the area is represented mostly by isolated discoveries, and along the former shoreline of Tulare Lake finds are typically characterized by chipped stone crescents, stemmed points, and other distinctive flaked stone artifacts (Rosenthal et al. 2007). Variations in consumption patterns emerged as well, with the valley sites more marked by consumption of waterfowl, mussels, and freshwater fish, while the foothills sites saw an increase in nuts, seeds, and a more narrowly focused diet than the valley sites.

The Middle Archaic (7450-2500 cal B.P.) saw an increase in semi-permanent villages along river and creek settings, with more permanent sites located along lakes with a more stable supply of water and wildlife. Due to the warmer and drier weather of this period, many lakes within the valley dramatically reduced in size, while some vanished completely (Garone 2011). Cultural patterns during this time saw an increase in stone tools, while a growth in shell beads, ornaments, and obsidian evidence an extensive and ever-growing long-distance trade network. Little is known of cultural patterns in the valley during the Upper Archaic (2500-850 B.P.), but large village structures appeared to be more common around local rivers. An overall reduction of projectile point size suggests changing bow and arrow technologies. Finally, the Emergent Period (850 cal B.P. - Historic Era) was generally marked by an ever-increasing specialization in tools, and the bow and arrow generally replaced the dominance of the dart and atlatl. Cultural traditions ancestral to those recorded during ethnographic research in the early 1900s are identifiable.

2.3 ETHNOGRAPHY

The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Yokuts are a sub-group of the Penutian language that covers much of coastal and central California and Oregon (Callaghan 1958). The Yokuts language contained multiple dialects spoken throughout the region, though many of them were mutually understandable (Merriam 1904).

The Yokuts have been extensively researched and recorded by ethnographers, including Powers (1877), Kroeber (1925), Gifford and Schenck (1926, 1929), Gayton (1945), Driver (1937), Harrington (1957), Latta (1977), and Wallace (1978). Much of the research from these ethnographers focuses on the central Yokuts tribes due to the northernmost tribes being impacted by Euro-Americans during the California Gold Rush of the mid 1800s, and by the southernmost tribes often being removed and relocated by the Spanish to various Bay Area or coastal missions. The central Yokuts tribes, and especially the western Sierra Nevada foothill tribes, were the most intact at the time of ethnographic study.

The most detailed ethnographic information gathered regarding Native American group territories in Central California is located within maps prepared by Kroeber. Based upon Kroeber's map of Southern and Central Yokuts (1925: Plate 47), the Project area is within the Nutunutu

Yokuts territory, who occupied the southern bank of the Kings River in modern-day Kings County (Kroeber 1925; Latta 1977). The closest village in this area was *Chiao* which was located along the Kings River approximately 7 miles north of the Project site (Kroeber 1925).

Primary Yokuts villages were typically located along lakeshores and major stream courses, with scattered secondary or temporary camps and settlements located near gathering areas in the foothills. Yokuts were organized into groups originally designated as tribelets by Kroeber, with one or more linked villages and smaller settlements within a territory (Kroeber 1925).

Designation of these units as 'tribelets' is often viewed as pejorative by many Native Americans, and for the remainder of this report will be referred to as 'local tribes' instead. Each local tribe was a land-owning group that was organized around a central village and shared common territory and ancestry. Most local tribe populations ranged from 150 to 500 people (Kroeber 1925). These local tribes were often led by a chief, who was often advised by a variety of assistants including the winatum, who served as a messenger and assistant chief (Gayton 1945). Early studies by Kroeber (1925), Gifford and Schenck (1926), and Gayton (1945) concluded that social and political authority within local tribes was derived from male lineage and patriarchy. However, more recent reexaminations (Dick-Bissonnette 1998) argue that this assumption of patriarchal organization was based on male bias by early 20th century researchers, and instead Yokuts sociopolitical authority was matriarchal in nature and centered around matrilineal use-rights and women's work groups.

Due to the abundance of natural resources within the greater Tulare Lake area, the Yokuts maintained some of the largest populations in North America west of the continental divide (Cook 1955a).

2.4 HISTORIC SETTING

2.4.1 California History

European contact in modern-day California first occurred in 1542 with the arrival of a Spanish expedition lead by Juan Rodríguez Cabrillo into San Diego Bay (Engstrand 1997). Expeditions along the California coast continued throughout the sixteenth century and primarily focused on finding favorable harbors for further expansion and trade across the Pacific. However, rocky shorelines, unfavorable currents, and wind conditions made traveling north from New Spain to the upper California coast a difficult and time-consuming journey (Eifler 2017). The topography of California, with high mountains, large deserts, and few natural harbors lead to European expansion into California only starting in the 1760s. As British and Russian expansion through fur trading encroached on California from the north, Spain established a system of presidios, pueblos, and missions along the California coast to defend its claim, starting with Mission San Diego de Alcalá in 1769 (Engstrand 1997).

2.4.2 Central California History

The San Joaquin Valley did not experience contact with Europeans until the late 1700s (Starr 2007). Life at the California missions was hard and brutal for Native Americans, with many dying of disease, poor conditions, and many fleeing to areas not under direct Spanish control (Jackson and Castillo 1995). The earliest exploration of the San Joaquin Valley by Europeans was likely by the Spaniards when in the fall of 1772 a group known as the Catalonian Volunteers entered into the valley through Tejon Pass in search of deserters from the Southern California missions (Zack 2017). However, the group only made it as far north as Buena Vista Lake in modern day Kern County before turning around due to the extensive swamps. Additional excursions to the valley were for exploration such as those led by Lieutenant Bariel Moraga in 1806, but also to find sites for suitable mission sites and to track down Native Americans fleeing the coastal missions (Cook 1958).

Subsequent expeditions were also sent to pursue outlaws from the coast who would often flee to the valley for safety. One of the subsequent explorations was an expedition in 1814 to 1815 with Sargent Juan Ortega and Father Juan Cabot, who left the Mission San Miguel with a company of approximately 30 Spanish soldiers and explored the San Joaquin Valley (Smith 2004). This expedition passed through the Kaweah Delta and modern-day Visalia and made a recommendation to establish a mission near modern-day Visalia. However, with European contact also came European diseases. Malaria and other new diseases were brought by Europeans, and in 1833 an epidemic of unknown origin traveled throughout the Central Valley. Some estimates place the Native American mortality of the epidemic as high as 75 percent (Cook 1955b). Combined with the rapid expansion of Americans into California in 1848 during the Gold Rush, Native American populations within the valley never fully recovered (Eifler 2017).

Initial settlement within the valley by Europeans in the 1830s was largely either by trappers or horse thieves (Clough and Secrest 1984). In fact, horse and other livestock theft was so rampant that ranching operations on the Rancho Laguna de Tache by the Kings River could not be properly established (Cook 1962). With the end of the Mexican American War and the beginning of the gold rush in 1848, the San Joaquin Valley became more populated with ranchers and prospectors. Most prospectors traveled by sea to San Francisco and used rivers ranging from the Sacramento River to the San Joaquin River to access the California interior (Eifler 2017). Most areas south of the San Joaquin River were less settled simply because those rivers did not connect to the San Francisco Bay area except in wet flood years. By 1850, California became a state, Tulare County was established in 1853, and Kings County was formed out of the western half of Tulare County in 1893.

2.4.3 Local History

Hanford was first formed as a railroad stop in 1877 when the Southern Pacific Railway laid a new cross-valley line connecting Goshen near Visalia to Coalinga on the west side of the valley (Hanford 2024). Hanford quickly grew into the trading center of the local area, incorporated in 1891 after a few setbacks with local fires, and became the County Seat when Kings County was formed in 1893. Tensions with the Southern Pacific Railroad's monopoly on shipping and

transportation lead to Hanford fighting for, and in 1897 receiving, a new competing north to south line of the San Francisco and San Joaquin Valley Railroad connecting Fresno to Bakersfield via Hanford (Menefee and Dodge 1913). The Southern Pacific Railway later formed into the Union Pacific Railroad, and the San Francisco and San Joaquin Valley Railroad later formed into the Burlington Northern Santa Fe Railroad.

The arrival of rail lines in the late 1800s brought an increase in agriculture and farms that clashed with existing ranching operations in the local area. One such conflict was the Mussel Slough Tragedy of 1880, in which seven locals died in a fight over land use between ranchers and the Southern Pacific Railroad (Clough and Secrest 1984). Escalating conflicts and livestock disputes between ranchers and farmers lead to the "No Fence Law" in 1874, which forced ranchers to pay for crop and property damage caused by their cattle (Ludeke 1980). With the passage of this law and the expansion of irrigation systems, predominant land use in the 1870s switched from grazing to farming (Mitchell 1974). This led to the beginning of the vast change of the San Joaquin Valley from native vegetation and grasslands to irrigated crops (Varner and Stuart 1975). During this time, small farming towns were established throughout the valley floor (Clough and Seacrest 1984).

Because water rights within California originally arose from the first come first serve policy of the Gold Rush era, diverting surface water to farms became big business, but a convoluted mess of customs, traditions, and conflicting claims (Zack 2017). To solve this mess, the Wright Act of 1887 was passed that allowed residents to petition a local county board of supervisors to create irrigation districts that had the power to issues bonds, and tax land within the district boundaries to pay for the creation and maintenance of canals and ditches for irrigation purposes.

At the same time, an important step forward was made in ditch-digging technology that allowed irrigation systems to be built at a faster pace. From the 1840s to 1890s, farm ditches and canals were largely constructed using buckboards and slip-scoops, which involved the use of a board pulled by horses in an upright position to level ground (Bulls 2010). Between 1883 and 1885, Scottish immigrant James Porteous had moved to Fresno and made significant improvements to the buckboard style scraper that allowed the new scraper to be pulled by two horses and scrape and move soil while dumping it at a controlled depth. This new design was patented and sold as the "Fresno Scraper", which lead to an explosion of ditch digging efforts within the San Joaquin Valley (Zack 2017).

The cumulative effect of this explosion of water diversion from the Kings, Kern, Kaweah, and Tule Rivers, which supplied 95 percent of the water, had a devastating effect on Tulare Lake (Adams et al. 2015). Between 1876 and 1885, the northern shoreline of Tulare Lake near the Lower Kings River had receded southwards by five miles (Baker 1876; Hammond 1885). By 1898, the lake had completely dried up (Figure 2-1).

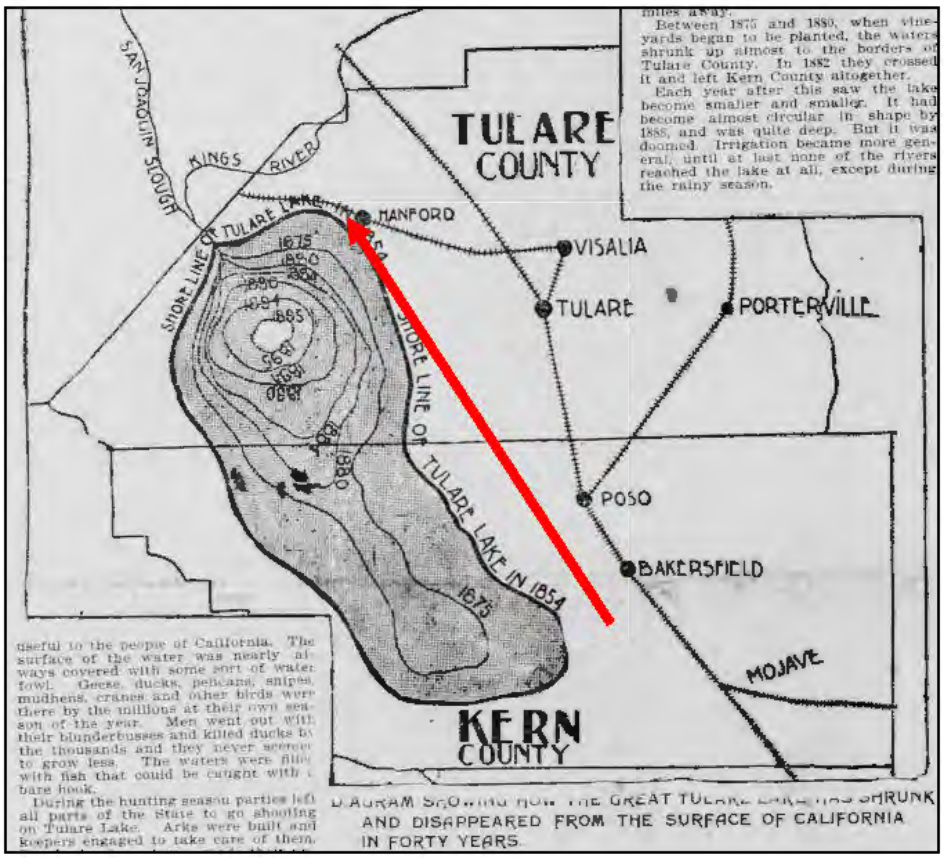


Figure 2-1 Map of Tulare Lake with receding shoreline, 1854 to 1898. Red arrow shows approximate Project location (Lee 1898).

The former lakebed was turned into agricultural lands, with water provided by the new canals and ditches. The destruction of the lake was another major impact to the Native American populations of the region. Diversion of the water from the former lakebed was never fully permanent, however, with heavy rains leading to the reemergence of Tulare Lake in 1937, 1952, 1969, 1983, 1997, and most recently in 2023 (Garrison et al. 2023).

3
METHODS

3.1 RECORDS SEARCH

On April 8, 2025, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area; and review of prior cultural studies completed in or near the Project boundary including recorded cultural resources such as historic and prehistoric archaeological sites, lithic debitage, buildings, or canals. SSJVIC staff researched historical United States Geological Survey (USGS) topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Resources Directory, and the California Inventory of Historic Resources (Appendix B).

3.2 ARCHIVAL RESEARCH

Archival research was conducted to investigate the historical background for any potential historical natural water sources, potential historic structures, buildings and historical deposits that may exist, and land use within the Project boundary. Historical maps, historical aerial photographs, historical USGS topographic maps, Google Earth aerial photographs, Google Street View photos, books, scholarly articles, and other records were used to better understand the prehistory and history of the Project area. The results of this research are presented in Chapter 4.

3.3 NAHC SACRED LANDS FILE

Taylored Archaeology sent a request on April 8, 2025, to the NAHC to identify places in or near the Project area that may be tribal cultural resources, including sacred sites or other resources of importance. The NAHC maintains confidential records of sites and landscapes with traditional, cultural, or religious value to the Native American community. Native American outreach with Tribes is not included in this scope of work. It is assumed that government-to-government consultation under Assembly Bill (AB) 52 will be conducted by the City as the CEQA lead agency.

3.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY

A pedestrian survey was conducted by Consuelo Sauls on April 26, 2025, on the entire Project site. The Project site consisted of an alfalfa field with a drainage basin in the southern portion of the Project site. Ms. Sauls walked 5-meter parallel transects within the project boundary, oriented east to west. The Project boundary was accessible and surveyed to identify any archaeological deposits that may be present on the ground surface. Ms. Sauls used a plan map, visible landmarks, and Gaia GPS application for navigation to locate and survey the Project area.

She also photographed the survey area using an iPhone 11 Pro digital camera. Ms. Sauls recorded her observations on a Survey Field Record.

4
RESULTS

4.1 RECORDS SEARCH

The SSJVIC provided the records search results in a letter on April 21, 2025 (Appendix B). The search results identified six previous investigations that have been conducted within the Project area (Table 4-1). These studies were conducted between 2000 and 2010. Of these six studies, only one study (KI-00114), completed in 2001, overlaps the Project boundary. The survey for KI-00114 was negative for cultural resources.

The SSJVIC records search results identified 10 previous investigations that have been conducted within the 0.5-mile radius (Table 4-2). These studies were conducted between 1981 and 2019. None of these studies intersected the Project boundary. As the result of these studies, three cultural resources have been documented within a 0.5-mile radius of the Project area (Table 4-3). These include two historic-era structures, the Southern Pacific Railroad (P-16-000122) and the Last Chance Ditch (P-16-000128) and one historical archaeological site (P-16-000068) of scattered historical debris along a partial covered irrigation ditch. The three cultural resources do not overlap the Project boundary.

Table 4-1
Previous Cultural Resources Studies within the Project Area

Report Number	Author(s)	Date	Report Title	Study
KI-00093	Christopher Ryan	2000	Supplemental Archaeological Survey for the Laguna Irrigation District Transmission Line Improvement Project, Fresno and Kings Counties, California	Supplemental Archaeological Survey of Utility Lines
KI-00100	Allen G. Pastron and Keith R. Brown	2000	Historical and Cultural Resource Assessment Update Existing Telecommunications Facility Site No. CV-503-01 Glendale Avenue Kings County, California	Historical and Cultural Resource Desktop Review
KI-00114	Nikki Cherry	2001	Nine Telecommunication Sites for Section 106 Review	Archaeological Field Survey
KI-00238	Jack Meyer, D. Craig Young and Jeffrey S. Rosenthal	2010	Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9	Archaeological Desktop Review
KI-00268	Alexandra Greenwald	2011	Archaeological Survey Technical Report for the California High Speed Train-Fresno to Bakersfield Section	Archaeological Field Survey and Extended Phase I Survey High-Speed Rail
KI-00269	Robert A. Schiffman	2015	Archaeological Evaluation of Areas Selected for Possible Nuclear Power Plants by the LADWP	Archaeological Desktop Review

Table 4-2
Previous Cultural Resources Studies within 0.5-mile radius of the Project Area

Report Number	Author(s)	Date	Report Title	Study
KI-00028	Brian Hatoff, Barb Voss, Sharon Waechter, Stephen Wee, Vance Benté	1995	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project	Archaeological Field Survey
KI-00042	Denise O'Connor and A.B. Clayton	1981	Archaeological Survey Report for an Interchange at 12th Avenue on Route 198, Kings County 06-KIN-198, R16.4/R17.4 06100-178200	Archaeological Field Survey
KI-00105	Donald G. Wren	2001	A Cultural Resource Study New Hanford High School Hanford Learning Center Project Hanford, California	Archaeological Field Survey
KI-00109	Bruce Love and Bai "Tom" Tang	2002	Historic Property Survey Report Cross Valley Rail Corridor Project Between the Cities of Visalia and Huron Tulare, Kings, and Fresno Counties, California	Archaeological and Architectural Field Survey
KI-00110	Bruce Love and Bai "Tom" Tang	2002	Archaeological Survey Report Cross Valley Rail Corridor Project Between the Cities of Visalia and Huron Tulare, Kings, and Fresno Counties, California	Archaeological Field Survey (Attachment A to KI-00109)
KI-00111	Bruce Love and Bai "Tom" Tang	2002	Historic Study Report/ Historical Resources Evaluation Report Cross Valley Rail Corridor Project Between the Cities of Visalia and Huron Tulare, Kings, and Fresno Counties, California	Architectural Field Survey and Evaluation (Attachment B to KI-00109)
KI-00192	David Lanner and Eric Wohlgemuth	2007	Archaeological Survey Report for the 12th Avenue Interchange on State Route 198, Hanford, Kings County, California	Archaeological Field Survey
KI-00203	Robert E. Parr	2011	Cultural Resource Assessment for the Replacement of Three Deteriorated Power Poles on the Southern California Edison Company Round Valley, Delta, and Lemoore 12 kv Circuits Kings and Tulare Counties, California	Archaeological Field Survey
KI-00310	Jessica Jones	2017	Cultural Resources Constraints Report Kingsburg-Lemoore Reconductor, Kings County, California	Archaeological Field Survey

Report Number	Author(s)	Date	Report Title	Study
KI-00327	David S. Whitley and Robert Azpitarte	2019	Phase I Survey/ Class III Inventory, Armona CSD Water Meter Project, Armona, Kings County, California	Archaeological and Architectural Field Survey

Table 4-3
Previous Recorded Cultural Resources within 0.5-mile radius of the Project Area

Resource Number	Age Association	Resource Type	Resource Description	Year Recorded	Resource Within Project Boundary
P-16-000068	Historic	Site	Scatter of historic artifacts and irrigation ditch	2001	No
P-16-000122	Historic	Site and Structure	Southern Pacific Railroad	2017	No
P-16-000128	Historic	Structure	Last Chance Ditch	2017	No

4.2 ARCHIVAL RESEARCH

The Project site and the surrounding area were mostly agricultural use. Available historical map coverage of the Project site dates to 1926. A review of the 1926 USGS topographic map depicts the site with no structures and bound to the south by the Mussel Slough. A 1954 USGS topo map depicts the site in a similar manner. Other than increased development from the Hanford urban area to the east of the site, no changes are noted between 1954 to 2021 (NETROnline 2025). Historic aerial photograph coverage of the Project site dates to 1957. A review of historic aerial photographs shows the Project site utilized for row crops from at least 1956 to present day (NETROnline 2025, Google 2025).

4.3 NAHC SACRED LANDS FILE RESULTS

The NAHC responded to SLF request on April 8, 2025 (Appendix C). The search results of the SLF were negative for the presence of tribal cultural resources within the Project area. The NAHC provided a contact list of Native American tribes who may have knowledge of cultural resources in the Project area (Appendix C).

4.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY RESULTS

During the pedestrian survey the Project site was comprised of alfalfa fields (Figure 4-1). Ground surface visibility was poor (0 to 5 percent) on most of the site due to alfalfa crops (Figure 4-2). The existing basin south of the alfalfa field had poor (0 to 5 percent) ground surface visibility due to annual grasslands and saplings (Figure 4-3). The low-lying area to the southwest of the alfalfa field had excellent ground surface visibility (100 percent) due to soil disturbance from heavy equipment (Figure 4-4). Rodent burrows and any related soil piles were closely examined for lithic

scatters and for indications of buried deposits. The Project site was accessible and surveyed. The basin and low-lying areas were opportunistically surveyed due to wet and muddy conditions, and slippery slopes (Figure 4-5).

No prehistoric or historic archaeological resources were identified during the pedestrian survey. The natural topography of the area has been altered by historical and modern agricultural practices and much of the land on the Project site has been graded and plowed, which has caused additional disturbance to the soil. While past agricultural activities may have potentially destroyed or obscured ground surface evidence of archaeological resources within the Project boundary, intact archaeological resources related to prior occupation of the area may potentially exist below the ground surface.



Figure 4-1 Overview of central portion of Project site, facing south.



Figure 4-2 Ground visibility in northeast portion of Project site, facing east.



Figure 4-3 Basin on south end of Project site, facing east.



Figure 4-4 Disturbed area in southwest portion of Project site, facing west.

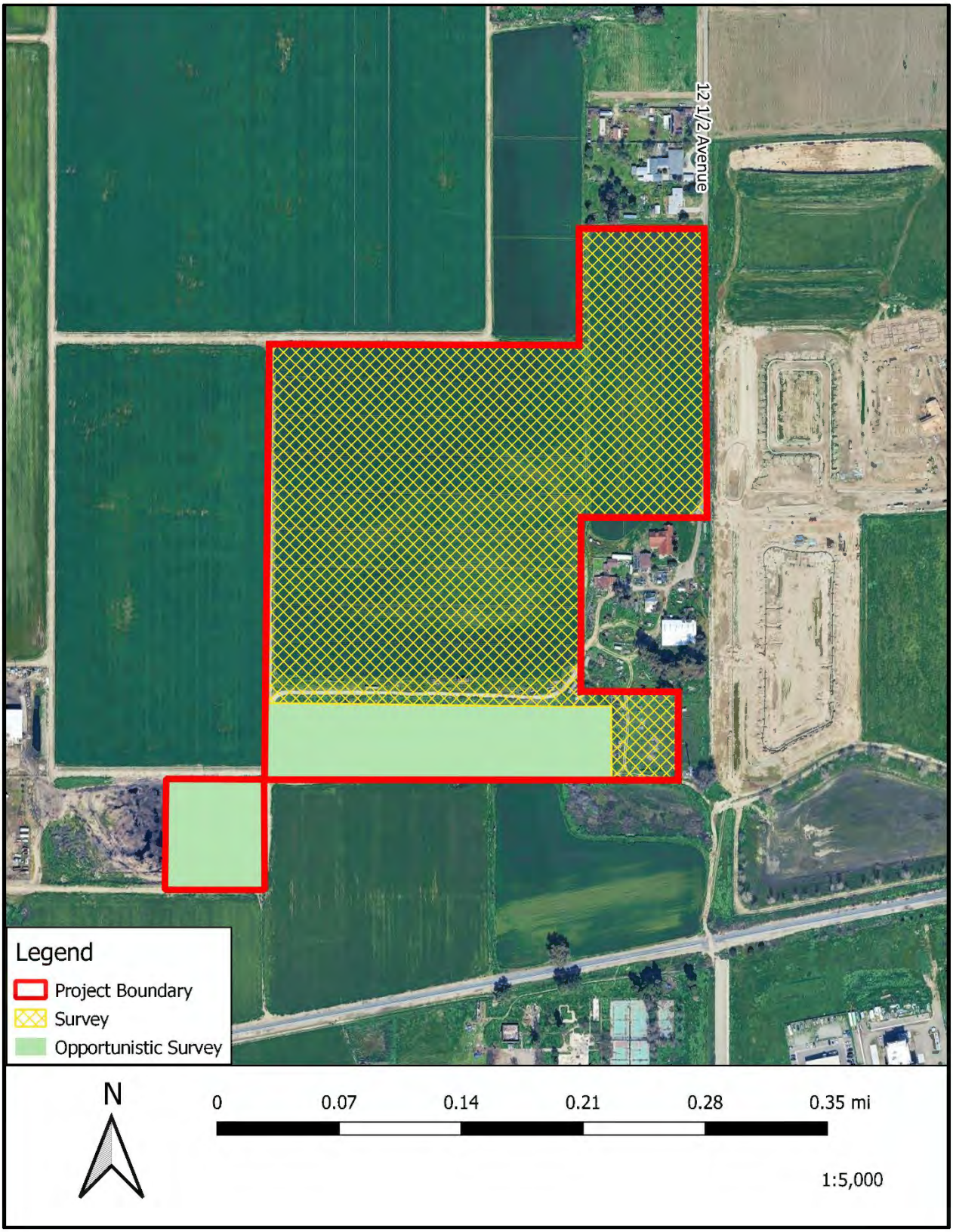


Figure 4-5 Survey coverage of Project site.

5
CONCLUSIONS AND RECOMMENDATIONS

Taylored Archaeology performed a Phase I Cultural Resources Assessment for the Millenium Estates Tentative Subdivision Map Project in Hanford, Kings County, California. The SSJVIC records search results indicated that there have been six previous cultural resources investigations conducted within the Project boundary. A review of these studies indicated only one study (KI-00114) overlapped the Project site. The survey for KI-00114 was negative for cultural resources. 10 previous investigations were conducted within a 0.5-mile radius of the Project. None of these studies overlap the Project site. Three cultural resources were documented within a 0.5-mile radius of the Project: 1) the historic-era Southern Pacific Railroad (P-16-000122), 2) the historic-era Last Chance Ditch (P-16-000128), and 3) a historical archaeological site (P-16-000068) of scattered historical debris along a partially covered irrigation ditch. None of these resources overlap the Project site and the proposed Project will not impact any of these resources. An examination of historic topographic maps and aerial images indicated that the Project site has largely been used for agricultural purposes. Taylored Archaeology's pedestrian survey of the Project boundary did not reveal any prehistoric or historic cultural resources. The NAHC's SLF search results were negative.

Based on the results of this investigation, Taylored Archaeology recommends the following best management practices be implemented during Project construction:

- If unidentified archaeological resources are encountered during ground disturbing activities in the Project boundary, all work shall be temporarily halted in the immediate vicinity (100 feet) until a qualified archaeologist can identify the discovery and assess its significance.

- If human remains are uncovered during construction, the Kings County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded an opportunity to make recommendations regarding the treatment and disposition of the remains.

6
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APPENDIX A

Personnel Qualifications

Consuelo Sauls, M.A., RPA 41591505
Archaeologist
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559.797.1572

Areas of Expertise

- Cultural Resource Management
- CEQA and Federal regulations
- Prehistoric Archaeology
- Laboratory Management
- Technical Writing
- Phase I Assessments

Years of Experience

- 16

Education

- M.A., Archaeology, University of Durham, 2014
- B.A., Anthropology, California State University, Fresno, 2009

Registrations/Certifications

- Registered Professional Archaeologist 41591505

Professional Affiliations

- Coalition for Diversity in California Archaeology
- Society for American Archaeology
- Society for California Archaeology
- Society of Black Archaeologists

Professional Experience

2019 –Present	Principal Investigator, Taylored Archaeology, Fresno, California
2018 – 2019	Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California
2016 – 2018	Principal Investigator, Soar Environmental Consulting, Inc., Fresno, California
2015	Archivist/Database Technician, Development and Conservation Management, Inc., Laguna Beach, California
2013	Laboratory Research Assistant, Durham University Archaeology Department and Archaeology Museum, Durham, England, UK
2011 – 2012	Laboratory Technician, University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, Pennsylvania
2008 – 2009	Laboratory Technician, California State University, Fresno
2008	Field School, California State University, Fresno

Technical Qualifications

Ms. Sauls meets the Secretary of the Interior's Professional Qualification Standards as an archaeologist. She has conducted pedestrian surveys, supervised Extended Phase I survey, authored technical reports, and completed the Section 106 process with the State Historic Preservation Officer and Tribal Historic Preservation Officer. Her experience includes data recovery excavation at Western Mono sites and processing recovered artifacts in the laboratory as well as conducting archival research about prehistory and ethnography of Central California. Ms. Sauls has authored and contributed to technical and letter reports in compliance with of the National Historical Preservation Act (NHPA) Section 106 and the California Environmental Quality Act (CEQA). She also has supported NHPA tribal consultation and responded to Assembly Bill 52 tribal comments. Ms. Sauls also has an extensive background supervising laboratory processing, cataloging, and conservation of prehistoric and historical archaeological collections. In addition, she worked with the Rock Art Heritage Group in the management, preservation, and presentation of rock art in museums throughout England, including a thorough analysis of the British Museum's rock art collections. At Durham University Archaeology Museum, Ms. Sauls processed the excavated skeletal remains of 30 individuals from the seventeenth century.

APPENDIX B

Records Search Results

California Historical Resources Information System



Fresno
Inyo
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
Email: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

4/21/2025

Consuelo Sauls
Taylored Archaeology
6083 N. Figarden Drive, Suite 616
Fresno, CA 93722

Re: Millenium Estates Tentative Subdivision Map
Records Search File No.: 25-158

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on Hanford USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.5 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ Custom GIS Maps ☐ GIS Data ☐ Hand Drawn Maps (Inyo County Only)

Resources within project area:	None
Resources within 0.5 mile radius:	P-16-000068, 000122, 000128
Reports within project area:	KI-00093, 00100, 00114, 00238, 00268, 00269
Reports within 0.5 mile radius:	KI-00028, 00042, 00105, 00109, 00110, 00111, 00192, 00203, 00310, 00327

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Report Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed
OHP Built Environment Resources Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see https://www.slc.ca.gov/shipwrecks/

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Celeste M. Thomson
Coordinator

APPENDIX C

Sacred Lands File Search Results

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

Commissioner
Vacant

ACTING EXECUTIVE SECRETARY
STEVEN QUINN

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

April 8, 2025

Consuelo Sauls
Taylored Archaeology

Via Email to: csaulsarchaeo@gmail.com

Re: Millenium Estates Tentative Subdivision Map Project, Kings County

To Whom It May Concern:

As requested, a record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed based on information submitted for the above referenced project. The results were negative. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. As such, a SLF search is not a substitute for consultation with all tribes that are traditionally and culturally affiliated with a project's geographic area.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. If within two weeks of notification, a response has not been received, the Commission requests that you follow-up with a telephone call or email to ensure that the project information was received.

If you receive notification of a change of address or phone number from a tribe, please notify the NAHC so that we can assure that our lists contain current information.

In addition to engaging in tribal consultation, you should consult the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center to determine whether it has information regarding the presence of recorded archaeological sites within the project area.

If you have any questions or need additional information, please contact me at melina.carlos@nahc.ca.gov.

Sincerely,

Melina Carlos

Melina Carlos
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Kings County
4/8/2025

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Kings	Kitanemuk & Yowlumne Tejon Indians	N	Delia Dominguez, Chairperson	115 Radio Street Bakersfield, CA, 93305	(626) 339-6785		2deedominguez@gmail.com	Kitanemuk Southern Valley Yokut	Fresno,Kern,Kings,Los Angeles,Madera,Monterey,San Benito,San Luis Obispo,Tulare	
	Santa Rosa Rancheria Tachi Yokut Tribe	F	Shana Powers, THPO	P.O. Box 8 Lemoore, CA, 93245	(559) 423-3900			Southern Valley Yokut	Fresno,Kern,Kings,Merced,Monterey,San Benito,San Luis Obispo,Tulare	10/3/2023
	Santa Rosa Rancheria Tachi Yokut Tribe	F	Samantha McCarty, Cultural Specialist II	P.O. Box 8 Lemoore, CA, 93245	(559) 633-3440		smccarty@tachi-yokut-nsn.gov	Southern Valley Yokut	Fresno,Kern,Kings,Merced,Monterey,San Benito,San Luis Obispo,Tulare	10/3/2023
	Santa Rosa Rancheria Tachi Yokut Tribe	F	Nichole Escalon, Cultural Specialist I	P.O. Box 8 Lemoore, CA, 93245	(559) 924-1278		nescalon@tachi-yokut-nsn.gov	Southern Valley Yokut	Fresno,Kern,Kings,Merced,Monterey,San Benito,San Luis Obispo,Tulare	10/3/2023
	Table Mountain Rancheria	F	Michelle Heredia-Cordova, Chairperson	P.O. Box 410 Friant, CA, 93626	(559) 822-2587	(559) 822-2693	mhcordova@tmr.org	Yokut	Fresno,Kern,Kings,Madera,Monterey,San Benito,San Luis Obispo,Tulare	12/21/2023
	Table Mountain Rancheria	F	Bob Pennell, Cultural Resource Director	P.O. Box 410 Friant, CA, 93626	(559) 325-0351	(559) 325-0394	rpennell@tmr.org	Yokut	Fresno,Kern,Kings,Madera,Monterey,San Benito,San Luis Obispo,Tulare	
	Tule River Indian Tribe	F	Kerri Vera, Environmental Department	P. O. Box 589 Porterville, CA, 93258	(559) 783-8892	(559) 783-8932	kerri.vera@tuleriv ertribe-nsn.gov	Yokut	Alameda,Amador,Calaveras,Contra Costa,Fresno,Inyo,Kern,Kings,Madera,Maripos a,Merced,Monterey,Sacramento,San	7/22/2016
	Tule River Indian Tribe	F	Neil Peyron, Chairperson	P.O. Box 589 Porterville, CA, 93258	(559) 781-4271	(559) 781-4610	neil.peyron@tuler ivertribe-nsn.gov	Yokut	Alameda,Amador,Calaveras,Contra Costa,Fresno,Inyo,Kern,Kings,Madera,Maripos a,Merced,Monterey,Sacramento,San	
	Wuksachi Indian Tribe/Eshom Valley Band	N	Kenneth Woodrow, Chairperson	1179 Rock Haven Ct. Salinas, CA, 93906	(831) 443-9702		kwood8934@aol.com	Foothill Yokut Mono	Alameda,Calaveras,Contra Costa,Fresno,Inyo,Kings,Madera,Marin,Maripo sa,Merced,Mono,Monterey,San Benito,San	6/19/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Millenium Estates Tentative Subdivision Map Project, Kings County.

Record: PROJ-2025-001860
Report Type: List of Tribes
Counties: Kings
NAHC Group: All

Appendix D

Phase I Environmental Site Assessment

Prepared For

N & M CAPITAL LLC
1878 NORTH MOONEY BOULEVARD, SUITE J
TULARE, CALIFORNIA 93274

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

PROPOSED DEVELOPMENT APN 011-010-010 (PORTION) MILLENIOUM WAY & 12 ½ AVENUE HANFORD, CALIFORNIA

Date Issued: February 13, 2025
Project Number 25-17

Prepared By

PAUL HUMPHREY, EP
7402 EAST CLINTON AVENUE
FRESNO, CALIFORNIA 93737
TEL (559) 592-3555

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **iv**

1.0 INTRODUCTION ..... **vi**

1.1 Purpose 1
1.2 Detailed Scope of Services 1
1.3 Significant Assumptions 2
1.4 Limitations and Exceptions 2
1.5 Special Terms and Conditions 2
1.6 Use Reliance 2

2.0 SITE DESCRIPTION **3**

2.1 Location and Legal Description 3
2.2 Site and Vicinity General Characteristics 3
2.3 Current Use of the Subject Property 3
2.4 Description of Site Improvements 3
2.5 Current Use of Adjoining Properties 3

3.0 USER PROVIDED INFORMATION **4**

3.1 Title Records 4
3.2 Environmental Liens or Activity and Use Limitation 4
3.3 Specialized Knowledge 4
3.4 Commonly Known or Reasonably Ascertainable Information 4
3.5 Valuation Reduction for Environmental Issues 4
3.6 Owner, Property Manager, and Occupant Information 4
3.7 Reason for Performing Phase I ESA 5

4.0 RECORDS REVIEW **6**

4.1 Standard Environmental Record Sources 6
4.2 Additional Environmental Record Sources 7
4.3 Physical Setting Sources 8
4.3.1 Topography 8
4.3.2 Soils/Geology 8
4.3.3 Hydrology 8
4.3.4 Flood Zone Information 9
4.3.5 Oil and Gas Exploration 9
4.3.6 Vapor Encroachment 9
4.4 Historical Use Information: Subject Property and Adjoining Properties 9
4.4.1 Aerial Photographs 9
4.4.2 Fire Insurance Maps 11
4.4.3 City Directories 11
4.4.4 Historical Topographic Maps 12
4.4.5 Additional Historical Record Sources 12
4.4.6 Prior Assessment Reports 12

5.0 SITE RECONNAISSANCE **13**

5.1 Methodology and Limiting Conditions 13
5.2 General Site Setting 13
5.3 Exterior Observations 13
5.3.1 Solid Waste Disposal 13
5.3.2 Surface Water Drainage 13

5.3.3 Wells and Cisterns 13
5.3.4 Wastewater 13
5.3.5 Additional Site Observations 13
5.4 Interior Observations 13
5.5 Potential Environmental Conditions 13
5.5.1 Hazardous Substances and Petroleum Products Used or Stored at the Site 13
5.5.2 Evidence of Releases 14
5.5.3 Polychlorinated Biphenyls (PCBs) 14
5.5.4 Landfills 14
5.5.5 Pits, Ponds, Lagoons, Sumps, and Catch Basins 14
5.5.6 On-Site ASTs and USTs 14
5.5.7 Radiological Hazards 14
5.5.8 Drinking Water 15
5.5.9 Additional Hazard Observations 15
5.5.10 Asbestos-Containing Materials (ACM) 15
5.5.11 Radon 15
5.5.12 Lead-Based Paint 15
5.5.13 Mold Evaluation 15
6.0 INTERVIEWS 16
6.1 Interview with Owner 16
6.2 Interview with Site Manager 16
6.3 Interview with Occupants 16
6.4 Interview with Local Government Officials 16
6.5 Interview with Others 16
7.0 FINDINGS AND CONCLUSIONS 17
7.1 Findings 17
7.1.1 On-Site Environmental Conditions 17
7.1.2 Off-Site Environmental Conditions 17
7.1.3 Controlled Recognized Environmental Conditions 17
7.1.4 Historical Recognized Environmental Conditions 17
7.1.5 De Minimis Environmental Conditions 17
7.2 Opinion 17
7.3 Conclusions 17
7.4 Recommendations 17
7.5 Deviations 18
8.0 REFERENCES 19
9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS 20
10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS 21
10.1 Definition of an Environmental Professional 21
10.2 Relevant Experience 21

FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Topographic Map

APPENDIX

Appendix A	Site Photographs	
Appendix B	Historical Research Documentation	
	Exhibit B-1	Aerial Photographs
Appendix C	Regulatory Records Documentation	
	Exhibit C-1	Mapped Database Report
	Exhibit C-2	General Public Records
Appendix D	Interview Records	
Appendix E	Client-Provided Documentation	
Appendix F	Other Supporting Documentation	
Appendix G	Qualifications Of Envionmental Professionals	

EXECUTIVE SUMMARY

Paul Humphrey, EP has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations set forth by N & M Capital LLC for the property identified as Kings County Recorder's Office assessor's parcel number (APN) 011-010-010 (portion), Hanford, California (the "Subject Property").

The Phase I Environmental Site Assessment is designed to provide N & M Capital LLC with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the Subject Property. This assessment was conducted utilizing generally accepted ESA industry standards in accordance with ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

The Subject Property includes approximately 30.39± acres of the parcel identified as APN 011-010-010 which is approximately 38.46± acres in size. The Subject Property is located on the west side of the proposed 12 ½ Avenue and approximately 0.18 miles south of West Lacey Boulevard in Hanford, California. The Subject Property consists of agricultural land. Improvements to the Subject Property are limited to an unpaved dirt road along the east property boundary and irrigation water standpipes and pipelines. Irrigation water is provided to the Subject Property from an off-site irrigation well.

Based on available historical documentation, the Subject Property has consisted of agricultural land since at least 1934. An area approximately two acres in size along the south boundary of the Subject Property appears to have been utilized for periodic storage of farm implements from approximately the mid-1980s up to the mid-2010s.

The Subject Property is situated within a residential and agricultural area of Hanford, California. The Subject Property is bound to the north by agricultural land and a rural residence with outbuildings; to the east by vacant land and under-construction single-family residences; to the southeast by a rural residence and associated outbuildings; to the south by a farm implement storage area followed by a stormwater basin; and to the west by agricultural land.

According to the online database known as Geotracker (http://geotracker.waterboards.ca.gov) maintained by the State Water Resource Control Board (SWRCB), groundwater beneath a site approximately 1.6 miles east of the Subject Property was at a depth of approximately 45 to 55 feet below surface grade in 2011 and direction of flow was identified as east.

Paul Humphrey, EP obtained and reviewed a database report from Environmental Risk Information Services (ERIS) for the Subject Property and the surrounding area. The Subject Property was not identified in the database. The ERIS database identified off-site listings as one RCRA TSD, one RCRA SQG, two RCRA NON GEN, one ENVIROSTOR, three C&D DEBRIS RECY, two LUST, one HHSS, one CERS TANK, one HIST TANK, one CLEANUP SITES, one CUPA, one DELISTED HAZ, and three EMISSIONS located within the prescribed search radii. Based on review of regulatory documentation, off-site location, and/or estimated direction of groundwater flow, these facilities do not represent a recognized environmental condition.

Conclusions

Paul Humphrey, EP has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of the property identified as APN 011-010-010 (portion), Hanford, California, the Subject Property. Any exceptions to or deletions from this practice are described in Section 1.4 of this report.

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-21 as: (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. Paul Humphrey, EP's assessment has revealed the following RECs associated with the Subject Property or nearby properties:

- No on-site RECs were identified during the course of this assessment.

Controlled Recognized Environmental Conditions (CRECs) are defined by the ASTM Standard Practice E1527-21 as a recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations). Paul Humphrey, EP's assessment has revealed the following CRECs associated with the Subject Property or nearby properties:

- No on-site CRECs were identified during the course of this assessment.

Historical Recognized Environmental Condition (HREC) is defined by the ASTM Standard Practice E1527-21 as a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). Paul Humphrey, EP's assessment has revealed the following HRECs associated with the Subject Property or nearby properties:

- No on-site HRECs were identified during the course of this assessment.

Business Environmental Risk (BER) is defined by the ASTM Standard Practice E1527-21 as a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. BERs do not qualify as recognized environmental conditions, as defined by the ASTM Standard Practice E1527-21. Paul Humphrey, EP's investigation has revealed the following BERs associated with the Subject Property or nearby properties:

- The Subject Property is currently and was historically used for agricultural purposes. There is a potential that agricultural related chemicals such as pesticides, herbicides, and fertilizers, may have been used onsite. Based on Paul Humphrey, EP's experience, during previous site development activities, near surface soils (where residual agricultural chemical concentrations would have most likely been present, if at all) are likely generally mixed with fill material or disturbed during grading. Also, it is common that engineered fill material is placed over underlying soils as part of site development activities. These additional variables serve to further reduce the potential for exposure to residual agricultural chemicals (if any). Based on these reasons, Paul Humphrey, EP concludes that the possible use of agricultural chemicals is not expected to represent a significant environmental concern. If redevelopment activities for

residential use are planned, it should be determined whether sampling relating to the former agricultural use is required by the local planning department or other applicable oversight agency.

Non-ASTM Considerations may include the presence of environmental conditions such as asbestos containing materials, lead-based paint, radon, mold, lead in drinking water, etc. which can affect the liabilities and financial obligations of the client, the health & safety of site occupants, and the value and marketability of the subject property. Paul Humphrey, EP's assessment has revealed the following Non-ASTM considerations associated with the Subject Property:

- No Non-ASTM considerations were identified during the course of the investigation.

Recommendations

Based on the information available at the time of this assessment, Paul Humphrey, EP does not recommend further investigation of the Subject Property at this time.

1.0 INTRODUCTION

Paul Humphrey, EP was retained by N & M Capital LLC to conduct a Phase I Environmental Site Assessment (ESA) of the property identified as APN 011-010-010 (portion), Hanford, California (Subject Property). The protocol used for this assessment is in general conformance with ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

On January 30, 2025, Paul Humphrey, EP conducted a site reconnaissance to assess the possible presence of petroleum products and hazardous substances at the Subject Property. Paul Humphrey, EP's investigation included a review of aerial photographs, a reconnaissance of adjacent properties, background research, and a review of available local, state, and federal regulatory records regarding the presence of petroleum products and/or hazardous substances at the Subject Property.

Paul Humphrey, EP contracted ERIS, to perform a computer database search for local, state, and Federal regulatory records pertaining to environmental concerns for the Subject Property and properties in the vicinity of the Subject Property (see Section 3.0).

1.1 Purpose

The purpose of this Phase I Environmental Site Assessment (ESA) was to identify Recognized Environmental Conditions (as defined by ASTM Standard E-1527-21) in connection with the Subject Property.

1.2 Detailed Scope of Services

The purpose of the Phase I Environmental Site Assessment is to assist the client in identifying potential environmental liabilities associated with the presence of any hazardous substances or petroleum products, their use, storage, and disposal at and in the vicinity of the subject property that may have occurred at the subject property. Property assessment activities focused on: 1) a review of federal, state, tribal and local databases that identify and describe underground fuel tank sites, leaking underground fuel tank sites, hazardous waste generation sites, and hazardous waste storage and disposal facility sites within the ASTM approximate minimum search distance; 2) a property and surrounding site reconnaissance, and interviews with the past and present owners and current occupants and operators to identify potential environmental contamination; and 3) a review of historical sources to help ascertain previous land use at the site and in the surrounding area.

The goal of Paul Humphrey, EP in conducting the Phase I Environmental Site Assessment was to identify *(I)* the presence of *hazardous sub- stances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment; (2)* the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the *environment;* or *(3)* the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under conditions that pose a *material threat* of a future *release* to the *environment*.

No other warranties are implied or expressed.

1.3 Significant Assumptions

There is a possibility that even with the proper application of these methodologies there may exist on the Subject Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Paul Humphrey, EP believes that the information obtained from the record review and the interviews concerning the site is reliable. However, Paul Humphrey, EP cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide N & M Capital LLC with information relating to the Subject Property.

1.4 Limitations and Exceptions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM 1527-21. Specific limitations and exceptions to this ESA are more specifically set forth below:

- A Phase I ESA interview with the previous owner of the Subject Property was not reasonably ascertainable. Consequently, information regarding the history and historical uses of the Subject Property obtained from an interview of the previous owner constitutes a data gap. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment.

1.5 Special Terms and Conditions

The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the client. No subsurface exploratory drilling or sampling was done under the scope of this work. Unless specifically stated otherwise in the report, no chemical analyses have been performed during the course of this ESA.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

1.6 Use Reliance

All reports, both verbal and written, are for the benefit of N & M Capital LLC. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of Paul Humphrey, EP.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Subject Property is located on the west side of the proposed 12 ½ Avenue and approximately 0.18 miles south of West Lacey Boulevard in Hanford, California. The Subject Property is identified as Kings County Recorder's Office APN 011-010-010 (portion).

2.2 Site and Vicinity General Characteristics

The Subject Property is located in a residential and agricultural area consisting of single-family residences and agricultural land.

2.3 Current Use of the Subject Property

The Subject Property consists of agricultural land.

2.4 Description of Site Improvements

The Subject Property consists of agricultural land approximately 30.39± acres in size. Improvements to the Subject Property are limited to an unpaved dirt road along the east property boundary and irrigation water standpipes and pipelines. Irrigation water is provided to the Subject Property from an off-site irrigation well.

2.5 Current Use of Adjoining Properties

During the vicinity reconnaissance, Paul Humphrey, EP observed the following land use on properties in the immediate vicinity of the Subject Property.

North: Agricultural land and a rural residence with outbuildings

East: Vacant land and under-construction single-family residences

Southeast: Rural residence and associated outbuildings

South: Farm implement storage area followed by a stormwater basin

West: Agricultural land

3.0 USER PROVIDED INFORMATION

Pursuant to ASTM E1527-21, Paul Humphrey, EP requested the following site information from N & M Capital LLC (User of this report).

3.1 Title Records

Paul Humphrey, EP requested title records from the User; however, a 50-year chain of title was not available at the Subject Property and was not provided for review.

3.2 Environmental Liens or Activity and Use Limitation

Paul Humphrey, EP requested information from the User regarding knowledge of environmental liens, activity and use limitations for the Subject Property. The User had no knowledge of any environmental liens or use or activity limitations.

3.3 Specialized Knowledge

Paul Humphrey, EP inquired with the User regarding any specialized knowledge of environmental conditions associated with the Subject Property. The User was not aware of any environmental conditions associated with the Subject Property.

3.4 Commonly Known or Reasonably Ascertainable Information

Paul Humphrey, EP inquired with the User regarding any commonly known or *reasonably ascertainable* information within the local community about the Subject Property that is material to *recognized environmental conditions* in connection with the Subject Property. The User had no reasonably ascertainable information within the local community about the Subject Property that is material to recognized environmental conditions in connection with the Subject Property.

3.5 Valuation Reduction for Environmental Issues

Paul Humphrey, EP inquired with the User regarding any knowledge of reductions in property value due to environmental issues. The User was not aware of any valuation reductions associated with the Subject Property.

3.6 Owner, Property Manager, and Occupant Information

The following information regarding the Owner, Subject Property Manager and Occupants was provided by the User and Key Site Manager.

Subject Property Owner:	Raffi Karayan
Subject Property Manager:	Raffi Karayan
Occupants:	None

3.7 Reason for Performing Phase I ESA

The purpose of this ESA was to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E-1527-21) in connection with the Subject Property. This ESA was also performed to permit the *User* to satisfy one of the requirements to qualify for the *innocent landowner*, *contiguous property owner*, or *bona fide prospective purchaser* limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"). ASTM Standard E-1527-13 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).

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

Information from standard Federal and state environmental record sources was provided through ERIS. Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. This integrated database also contains postal service data in order to enhance address matching. Records from one government source are compared to records from another to clarify any address ambiguities. The demographic and geographic information available provides assistance in identifying and managing risk. The accuracy of the geocoded locations is approximately +/-300 feet.

In some cases, location information supplied by the regulatory agencies is insufficient to allow the database companies to geocode facility locations. These facilities are listed under the unmappables ("orphan sites") section within the ERIS report. A review of the unmappable facilities indicated that none of these facilities are within the ASTM minimum search distance from the Subject Property.

Regulatory information from the database sources regarding possible recognized environmental conditions, within the ASTM minimum search distance from the Subject Property, was reviewed. Specific facilities are discussed below the Table if determined likely that a potential recognized environmental condition has resulted at the Subject Property from the listed facilities. Please refer to Appendix C for a complete listing.

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property
NPL, PROPOSED NPL	1	No	0	
DELISTED NPL	0.5	No	0	
SEMS, SEMS ARCHIVE	0.5	No	0	
CERCLIS, CERCLIS NFRAP, CERCLIS LIENS	0.5	No	0	
RCRA CORRACTS	1	No	0	
RCRA-TSD	0.5	No	1	No
RCRA LQG, SQG, CESQGs, VGN, NLR, NON GEN	0.25	No	3	No
FED ENG, FED INST	TP	No	0	
ERNS	TP	No	0	
FED BROWNFIELDS	0.5	No	0	
STATE/TRIBAL HWS (includes RESPONSE, Envirostor, DELISTED ENVS)	1	No	1	No

Database	Search Distance (Miles)	Subject Property Listed	Total Number of Listings	Potential Environmental Concern to the Subject Property
SWF/LF	0.5	No	0	
HWP	1	No	0	
LDS	0.5	No	0	
LUST, DELISTED LST	0.5	No	2	No
UST, UST SWEEPS	0.25	No	0	
UST CLOSURE	0.5	No	0	
HHSS, AST, DELISTED TNK, CERS TANK	0.25	No	2	No
DELISTED HAZ, LUR, HLUR, DEED, VCP	0.5	No	1	No
CLEANUP SITES, DELISTED CLEANUP	0.5	No	1	No
CERS HAZ	0.125	No	0	
DELISTED CTNK, HIST TANK	0.25	No	1	No
TRIBAL LISTINGS	0.25-0.5	No	0	
DELISTED COUNTY, CUPA	0.25	No	1	No
EMISSIONS	0.25	No	3	No
Additional State & Federal Listings	PO-1	No	3	No

The Subject Property was not identified in the database. The ERIS database identified off-site listings as one RCRA TSD, one RCRA SQG, two RCRA NON GEN, one ENVIROSTOR, three C&D DEBRIS RECY, two LUST, one HHSS, one CERS TANK, one HIST TANK, one CLEANUP SITES, one CUPA, one DELISTED HAZ, and three EMISSIONS located within the prescribed search radii. Based on review of regulatory documentation, off-site location, and/or estimated direction of groundwater flow, these facilities do not represent a recognized environmental condition.

4.2 Additional Environmental Record Sources

4.2.1 County Recorder/ Assessor

According to the Kings County Recorder's Office, no environmentally related liens or deed restrictions have been recorded against the Subject Property.

4.2.2 Fire Officials

Records from the Kings County Fire Department were reviewed for evidence indicating the presence of underground storage tanks and for the use of hazardous substances. No record was found for the Subject Property.

4.2.3 Building Department

Records from the Kings County Building and Planning Department were reviewed for evidence indicating the developmental history of the Subject Property, and for the presence of documentation relative to underground storage tanks. No records indicative of the current or past presence of USTs were noted.

4.2.4 Other Agencies

Paul Humphrey, EP's January 30, 2025, review of SWRCB Geotracker records of the leaking underground fuel tank (LUFT) database indicated that no record of LUFTs are on file with the RWQCB for the Subject Property.

Paul Humphrey, EP's January 30, 2025, review of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) Envirostor California cleanup sites database available via the DTSC Internet Website indicated that no records of cleanup sites are on file with the DTSC for the Subject Property.

4.3 Physical Setting Sources

4.3.1 Topography

The USGS, Hanfrod, California Quadrangle 7.5 minute series topographic map was reviewed for this ESA. The Hanford, California Quadrangle map was published by the USGS in 1954. According to the contour lines on the topographic map, the elevation of the Subject Property is approximately 240 feet above mean sea level (MSL). The contour lines in the area of the Subject Property indicate the area is sloping gently to the west southwest. The Subject Property is depicted as having no structures or improvements.

4.3.2 Soils/Geology

The Subject Property is located within the Great Valley geomorphic province, a long structural trough situated between the Sierra Nevada Mountains to the east, the Coast Range Mountains to the west and Tehachapi Mountains to the south. In the Hanford area, the sediments consist of recent and older alluvium derived primarily from the Sierra Nevada Mountains. Older (Pleistocene) alluvium unconformably overlies Pliocene-Pleistocene continental and marine deposits. The valley basement, consisting of pre-Tertiary granitic and metamorphic rocks, underlies the clastic section at a depth in excess of 2,000 feet below ground surface. Shallow soil stratigraphy in the Kings County area is primarily sandy soils and sand-silt combination soils.

4.3.3 Hydrology

The site is located in the San Joaquin Valley groundwater basin, which is part of the San Joaquin Basin Hydrologic Study Area (HSA). Twenty-six ground-water basins and areas of

potential groundwater storage have been identified in the San Joaquin Basin HSA. The HSA is bounded by the Sacramento-San Joaquin Delta to the north, the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coastal Ranges to the west. Groundwater in the vicinity of the site is found within the Central Valley regional aquifer system, an unconfined to semi-confined aquifer system within the older alluvium and deeper continental deposits. According to the online database known as Geotracker maintained by the SWRCB, groundwater beneath a site approximately 1.6 miles east of the Subject Property was at a depth of approximately 45 to 55 feet below surface grade in 2011 and direction of flow was identified as east.

No settling ponds, surface impoundments, wetlands or natural catchbasins were observed at the Subject Property during this investigation.

4.3.4 Flood Zone Information

A review of the Flood Insurance Rate Maps, published by the Federal Emergency Management Agency, was performed. According to Panel Number 06031C0185C, dated June 16, 2009, the Subject Property is located in Flood Zone X.

4.3.5 Oil and Gas Exploration

The on-site reconnaissance addressed oil and gas exploration at the Subject Property. According to the California Department of Conservation Geologic Energy Management, no operating or abandoned oil or gas wells are on or adjacent to the Subject Property.

4.3.6 Vapor Encroachment

A Tier 1 Vapor Encroachment Screen (VES) pursuant to ASTM E2600-10 was performed as part of this assessment to determine whether a potential *vapor encroachment condition* (VEC) exists at the Subject Property. The VES included the review of reasonably ascertainable information for the Subject Property and nearby properties. During the course of this assessment, a reasonable probability was not identified to indicate that a VEC exists at the Subject Property.

4.4 Historical Use Information: Subject Property and Adjoining Properties

Based on available historical documentation, the Subject Property has consisted of agricultural land since at least 1934. An area approximately two acres in size along the south boundary of the Subject Property appears to have been utilized for periodic storage of farm implements from approximately the mid-1980s up to the mid-2010s.

The adjoining properties consisted of agricultural land, range land, and a rural residence with outbuildings by 1934 with increasing use as agricultural land and rural residences by the mid-1950s.

4.4.1 Aerial Photographs

Available aerial photographs dated 1934, 1942, 1954, 1966, 1976, 1986, 1994, 2003, 2004, 2005, 2006, 2009, 2010, 2012, 2014, 2016, 2018, 2020, 2022, and 2024, from ERIS were reviewed for this ESA. Copies of selected photographs are included in Appendix B-1 of this report. The photographs are discussed below:

Date:	1934
Scale:	1" = 500'
Photo ID:	Fairfield
Description:	This photograph depicts the Subject Property as agricultural land. The north adjoining property appears as agricultural land. The east adjoining property appears as agricultural land. The southeast adjoining property appears as a rural residence, barn, and outbuildings. The south adjoining property appears as a seasonal streambed or slough followed by agricultural land. The west adjoining property appears as agricultural land.

Date:	1942
Scale:	1" = 500'
Photo ID:	ASCS
Description:	This photograph depicts the Subject Property and adjoining properties as in the 1934 photograph.

Date:	1954
Scale:	1" = 500'
Photo ID:	AMS
Description:	This photograph depicts the Subject Property and the adjoining properties as in the 1942 photograph. The south adjoining seasonal streambed or slough has been narrowed.

Date:	1966
Scale:	1" = 500'
Photo ID:	MD
Description:	This photograph depicts the Subject Property and the east, southeast, south, and west adjoining properties as in the 1954 photograph. The north adjoining property appears as agricultural land and a rural residence with outbuildings.

Date:	1976
Scale:	1" = 500'
Photo ID:	USGS
Description:	This photograph depicts the Subject Property and the adjoining properties as in the 1966 photograph.

Date:	1986
Scale:	1" = 500'
Photo ID:	USGS
Description:	This photograph depicts the Subject Property as agricultural land with a small area on and along the south boundary of the site for what appears to be farm equipment storage. The north, east, southeast, and west adjoining properties appear as in the 1976 photograph. The south adjoining property appears as a strip of land for equipment storage followed by a water storge basin.

Date:	1994
Scale:	1” = 500’
Photo ID:	USGS
Description:	This photograph depicts the Subject Property and the adjoining properties as in the 1986 photograph.

Date:	2003, 2004, 2005, 2006, 2009, 2010, 2012, 2014
Scale:	1” = 500’
Photo ID:	USDA
Description:	These photographs depict the Subject Property Subject Property and the adjoining properties as in the 1994 photograph.

Date:	2016, 2018, 2020
Scale:	1” = 500’
Photo ID:	USDA
Description:	These photographs depict the Subject Property as agricultural land. Farm equipment storage is no longer present on the southern portion of the site. The adjoining properties appear as in the 2003, 2004, 2005, 2006, 2009, 2010, 2012, and 2014 photographs.

Date:	2022
Scale:	1” = 500’
Photo ID:	USDA
Description:	This photograph depicts the Subject Property and the north, southeast, south, and west adjoining properties as in the 2016, 2018, and 2020 photographs. The east adjoining property appears as vacant land with a portion graded for development.

Date:	2024
Scale:	1” = 500’
Photo ID:	MAXAR
Description:	This photograph depicts the Subject Property and adjoining properties as in the 2022 photograph.

4.4.2 Fire Insurance Maps

Historical Sanborn Fire Insurance maps were reviewed online at http://www.spl.org/. Fire insurance maps, which commonly date back to the 1800s, are typically reviewed in order to evaluate whether past usage or construction on the Property or within the near vicinity is environmentally noteworthy. Fire insurance map coverage of the area of the Property was not identified.

4.4.3 City Directories

Historical City directories published by Haines were reviewed at the Fresno County Library in Fresno, California for past names and business that were listed for the Property. The findings are presented in the following table:

YEAR	ON-SITE
1982, 1992, 2001, 2015, 2019	No listing in likely address range of the Subject Property. North and southeast adjoining properties include residential listings

4.4.4 Historical Topographic Maps

The review of historical topographic maps was not reviewed for this study. Historical use of the Subject Property was researched using other standard historical sources.

4.4.5 Additional Historical Record Sources

Additional historical record sources were not reviewed.

4.4.6 Prior Assessment Reports

No prior reports or relevant documentation in association with the Subject Property were made available to Paul Humphrey, EP during the course of this assessment.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The Subject Property was inspected by Paul Humphrey on January 30, 2025. The weather at the time of the site visit was clear and approximately 60 degrees.

5.2 General Site Setting

The Subject Property is located within residential and agricultural area located on the west side of the proposed 12 ½ Avenue and approximately 0.18 miles south of West Lacey Boulevard, California.

5.3 Exterior Observations

5.3.1 Solid Waste Disposal

Solid waste is not generated on the Subject Property. No indication of potentially hazardous material disposal was noted during the site reconnaissance.

5.3.2 Surface Water Drainage

The Subject Property consists of agricultural land. Drainage appears sufficient as no areas of ponding or standing water were noted during the site visit.

5.3.3 Wells and Cisterns

No aboveground evidence of wells or cisterns was observed during the site reconnaissance.

5.3.4 Wastewater

No indications of industrial wastewater disposal or treatment facilities were observed during the onsite reconnaissance.

5.3.5 Additional Site Observations

Improvements to the Subject Property are limited to an unpaved dirt road along the east property boundary and irrigation water standpipes and pipelines. Irrigation water is provided to the Subject Property from an off-site irrigation well.

5.4 Interior Observations

The Subject Property had no buildings or structures.

5.5 Potential Environmental Conditions

5.5.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

No evidence of the use of hazardous materials was observed on the Subject Property.

5.5.1.1 Unlabeled Containers and Drums

No unlabeled containers or drums were observed during the site reconnaissance.

5.5.1.2 Disposal Locations of Regulated/ Hazardous Waste

No obvious indications of hazardous waste disposal were observed on the Subject Property or were indicated during interviews.

5.5.2 Evidence of Releases

No obvious indications of hazardous material or petroleum product releases, such as stained areas or stressed vegetation, were observed during the site reconnaissance or reported during interviews.

5.5.3 Polychlorinated Biphenyls (PCBs)

Older transformers and other electrical equipment could contain polychlorinated biphenyls (PCBs) at a level that subjects them to regulation by the U.S. EPA. PCBs in electrical equipment are controlled by United States Environmental Protection Agency regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified:

- Less than 50 parts per million (PPM) of PCBs – "*Non-PCB" transformer*
- 50 ppm-500 ppm – "*PCB-Contaminated" electrical equipment*
- Greater than 500 ppm – "*PCB" transformer*

No potential PCB-containing equipment such as transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, etc., is present.

5.5.4 Landfills

No evidence of on-site landfilling was observed or reported during the site reconnaissance.

5.5.5 Pits, Ponds, Lagoons, Sumps, and Catch Basins

No evidence of on-site pits, ponds, lagoons, sumps or catch basins was observed or reported during the site reconnaissance.

5.5.6 On-Site ASTs and USTs

No evidence of ASTs or USTs was observed during the Subject Property reconnaissance or reported during interviews.

5.5.7 Radiological Hazards

No radiological substances or equipment were observed or reported stored on the subject site.

5.5.8 Drinking Water

Drinking water is not provided or supplied to the Subject Property.

5.5.9 Additional Hazard Observations

No additional hazards were observed on the site.

5.5.10 Asbestos-Containing Materials (ACM)

An evaluation of ACM was not included in the scope of services and was not conducted.

5.5.11 Radon

The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action limit of 4.0 picoCuries per Liter (pCi/L). It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Review of the EPA Map of Radon Zones places the Subject Property in Zone 2, where average predicted radon levels are between 2.0 and 4.0 pCi/L.

5.5.12 Lead-Based Paint

An evaluation of lead-based paint was not included in the scope of services and was not conducted.

5.5.13 Mold Evaluation

A mold evaluation was not included in the scope of services and was not conducted.

6.0 INTERVIEWS

6.1 Interview with Owner

The representative of the owner of the Subject Property parcels was identified as Raffi Karayan. Mr. Karayan was not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Subject Property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Subject Property; or any notices from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

Mr. Karayan indicated that he purchased the Subject Property in 2014 or 2015 and it has been lease farmed since ownership.

6.2 Interview with Site Manager

See Section 6.1 Above.

6.3 Interview with Occupants

The Subject Property is not occupied.

6.4 Interview with Local Government Officials

An interview was conducted with the Kings County Environmental Health Department (KCEHD). According to KCEHD staff, no records were identified for the Subject Property.

An interview was conducted with a clerk at the Kings County Planning and Development Department. According to the clerk, no records of environmental concern were identified for the Subject Property.

An interview was conducted with the Kings County Fire Department (KCFD). According to KCFD staff, no records were identified for the Subject Property.

6.5 Interview with Others

Additional interviews were not conducted.

7.0 FINDINGS AND CONCLUSIONS

7.1 Findings

7.1.1 On-Site Environmental Conditions

No on-site recognized environmental conditions were identified during the course of this assessment.

7.1.2 Off-Site Environmental Conditions

No off-site RECs were identified that were considered likely to impact the Subject Property.

7.1.3 Controlled Recognized Environmental Conditions

No on-site CRECs were identified during the course of this assessment.

7.1.4 Historical Recognized Environmental Conditions

No on-site HRECs were identified during the course of this assessment.

7.1.5 De Minimis Environmental Conditions

No *de minimis* environmental conditions were identified in connection with the Subject Property during the course of this assessment.

7.2 Opinion

Based on our professional opinion, no recognized environmental conditions in connection with the Subject Property were identified during the course of this assessment.

7.3 Conclusions

Paul Humphrey, EP has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of the property identified as APN 011-010-010 (portion), Hanford, California, the Subject Property. Any exceptions to or deletions from this practice are described in Section 1.4 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

Paul Humphrey, EP's investigation has revealed the following BERs associated with the Subject Property or nearby properties:

- The Subject Property is currently and was historically used for agricultural purposes. There is a potential that agricultural related chemicals such as pesticides, herbicides, and fertilizers, may have been used onsite. Based on Paul Humphrey, EP's experience, during previous site development activities, near surface soils (where residual agricultural chemical concentrations would have most likely been present, if at all) are likely generally mixed with fill material or disturbed during grading. Also, it is common that

engineered fill material is placed over underlying soils as part of site development activities. These additional variables serve to further reduce the potential for exposure to residual agricultural chemicals (if any). Based on these reasons, Paul Humphrey, EP concludes that the possible use of agricultural chemicals is not expected to represent a significant environmental concern. If redevelopment activities for residential use are planned, it should be determined whether sampling relating to the former agricultural use is required by the local planning department or other applicable oversight agency.

7.4 Recommendations

Based on the information available at the time of this assessment, Paul Humphrey, EP does not recommend further investigation of the Subject Property at this time.

7.5 Deviations

This Phase I ESA substantially complies with the scope of services and ASTM 1527-21 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), as amended, except for exceptions and/or limiting conditions as discussed in Section 1.4.

8.0 REFERENCES

Reports, Plans, and Other Documents Reviewed:

American Society for Testing and Materials, *Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*, ASTM Designation: E2600

American Society for Testing and Materials, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM Designation: E1527-13

American Society for Testing and Materials, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM Designation: E1527-21

ERIS, Aerial Photograph Report, Lacey Blvd & 12 1/2 Avenue, Hanford, California, Job number 25-17

ERIS, Radius Database Report, Lacey Blvd & 12 1/2 Avenue, Hanford, California, Job number 25-17

State of California Department of Conservation Geologic Energy Management web page, https://maps.conservation.ca.gov/oilgas/

State of California Department of Water Resources Division of Planning and Local Assistance, Groundwater Level Data Retrieval Map Interface web page, http://well.water.ca.gov/map/map.html

United States Department of Agriculture, Soil Conservation Service Soil Survey Kings County, California, 1986

US Environmental Protection Agency, Map of Radon Zones web page, http://www.epa.gov/iaq/radon/zonemap.html

US Environmental Protection Agency, Office of Water web page, http://www.epa.gov/ogwdw000/swp/ssa/ssahome.html

U.S. Geological Survey, Hanford, California Topographic Quadrangle, 1954

Agencies Contacted:

Kings County Building and Planning Department

Kings County Fire Department

Kings County Assessor's Office

Kings County Department of Environmental Health

9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

I declare that, to the best of my professional knowledge and belief, I have met 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*. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Paul Humphrey, EP
Environmental Professional

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

10.1 Definition of an Environmental Professional

An Environmental Professional means: (1) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened re- leases (see § 312.l(c)) on, at, in, or to a property, sufficient to meet the objectives and performance factors in §§ 312.20(e) and (t). (2) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in § 312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience. (3) An environmental professional should remain cur- rent in his or her field through participation in continuing education or other activities. (4) The definition of environmental professional pro- vided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration Jaws to the activities to be undertaken as part of the inquiry identified in § 312.21(b). (5) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

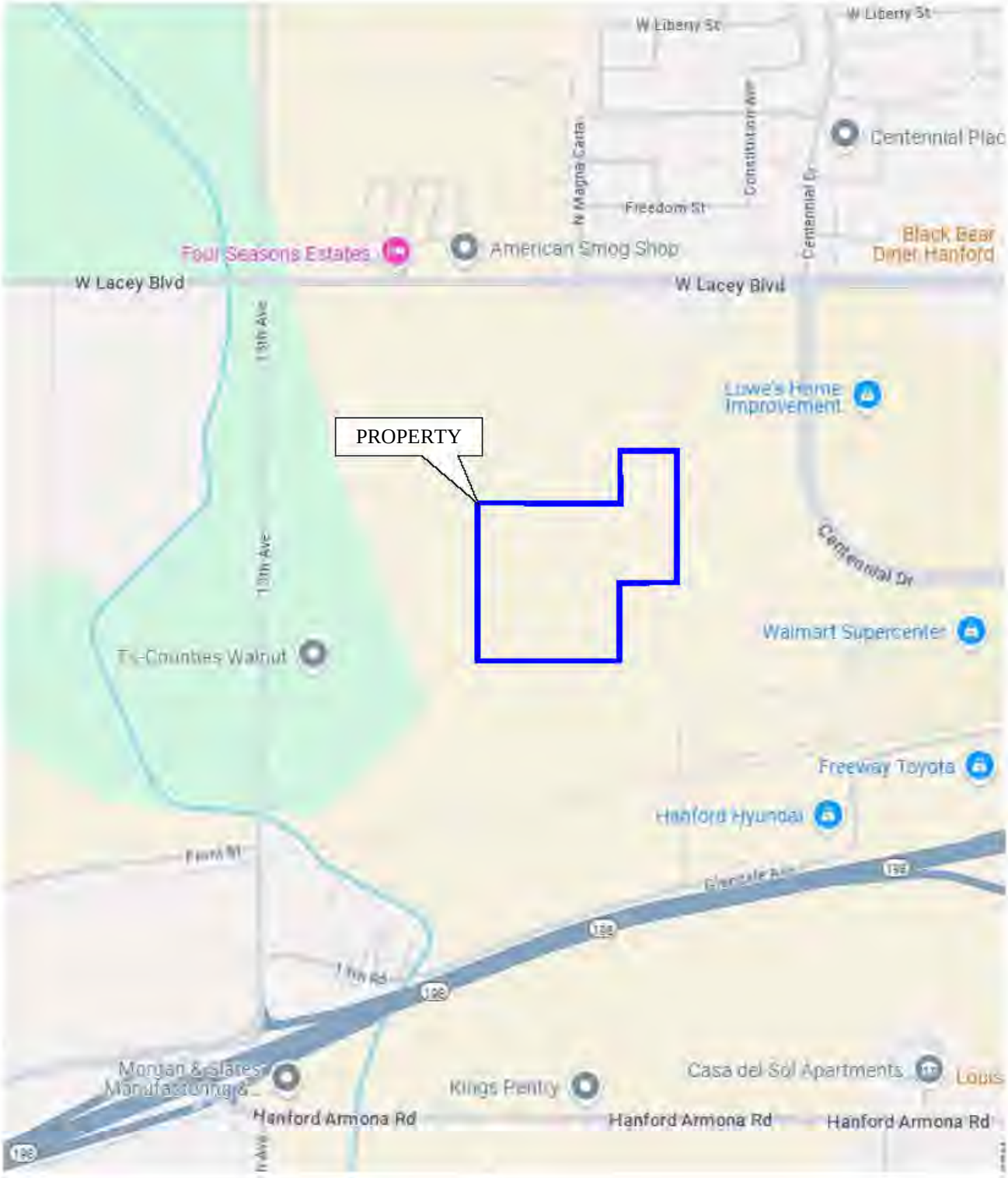
10.2 Relevant Experience

Relevant experience, as used in the definition of environmental professional in this section, means: participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and sub- surface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (see § 312.l(c)) to the subject property.

Resumes for the Environmental Professionals involved in this project are included in Appendix G.

FIGURES

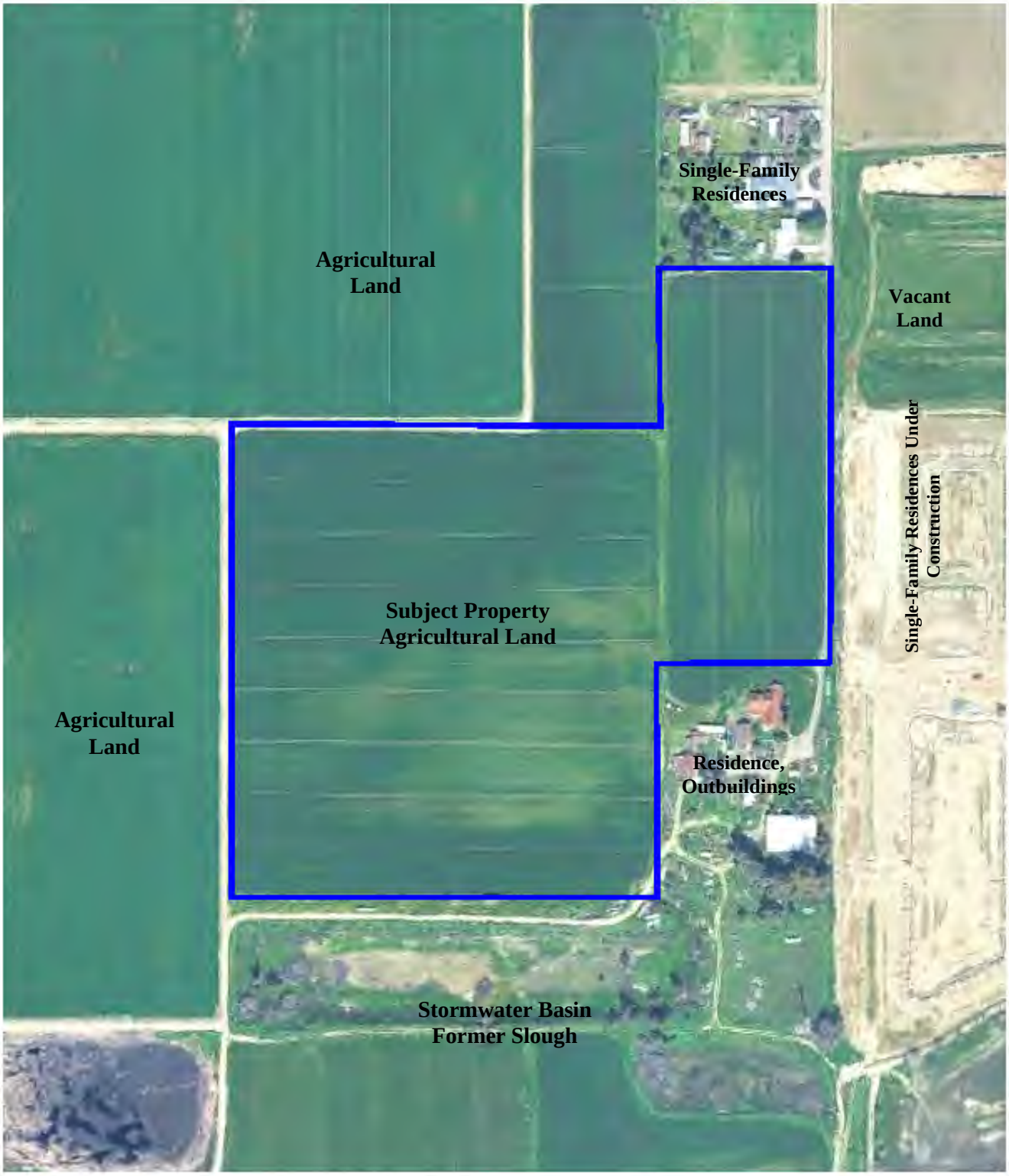
SITE LOCATION MAP
SITE PLAN
SITE TOPOGRAPHIC MAP



SITE VICINITY MAP

PAUL HUMPHREY, EP
7402 E. Clinton Avenue
FRESNO, CALIFORNIA 93737
(559) 977-9813

Site Name:	Tentative Subdivision
Site Address:	Portion of APN 011-010-010 Hanford, California
Project Number:	25-17



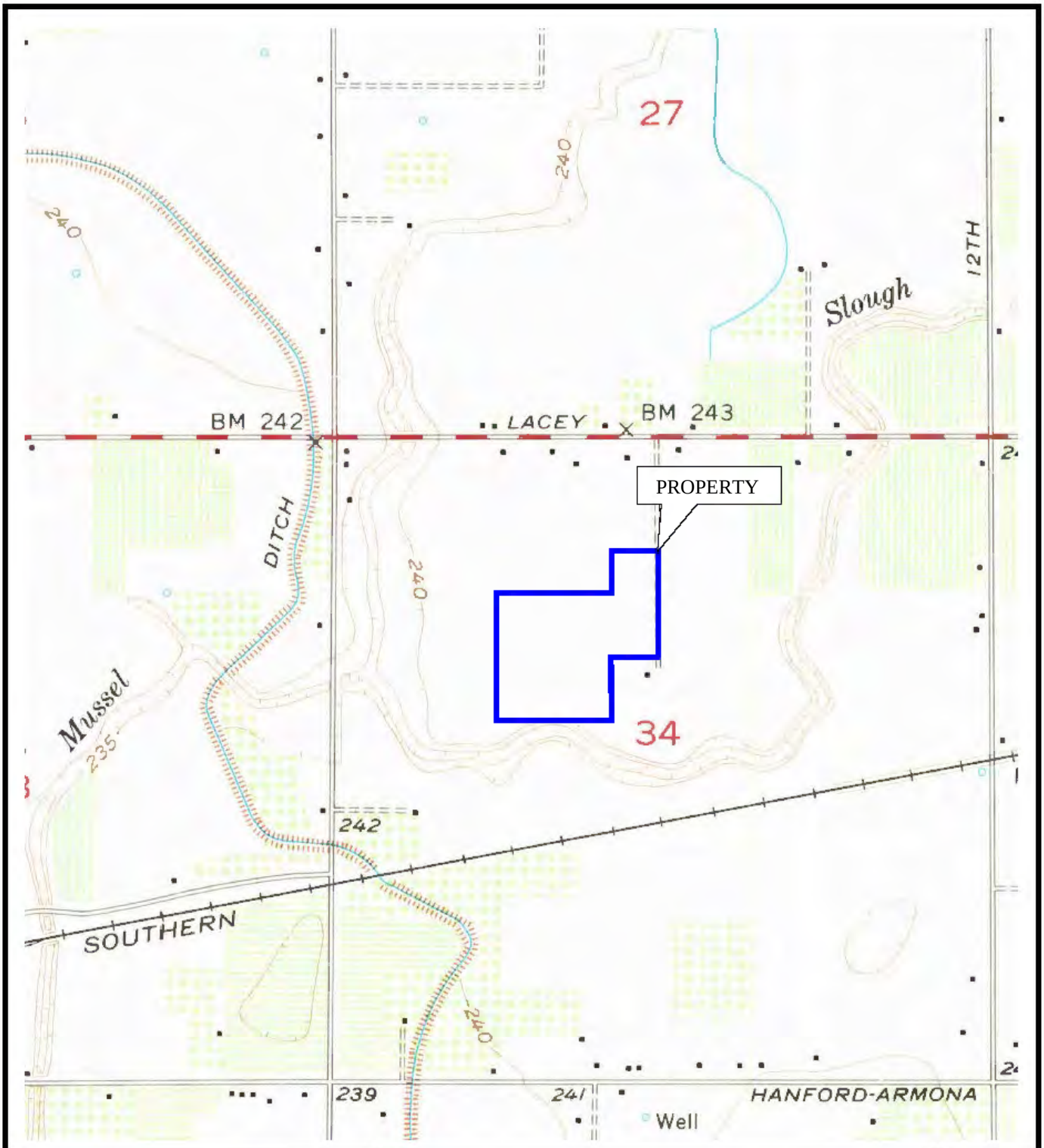
SITE PLAN

NORTH

Not to scale

PAUL HUMPHREY, EP
7402 E. CLINTON AVENUE
FRESNO, CA 93737
(559) 977-9813

Site Name:	Tentative Subdivision
Site Address:	Portion of APN 011-010-010 Hanford, California
Project Number:	25-17



PAUL HUMPHREY, EP 7402 E. Clinton Avenue FRESNO, CALIFORNIA 93737 (559) 977-9813	**TOPOGRAPHIC MAP** Source: U.S.G.S. 7.5 Minute Topographic Map Hanford, CA, Quadrangle, 1954	⇑ **N**

APPENDIX A

SITE PHOTOGRAPHS



1. Central east portion of the Subject Property.



2. East portion of the Subject Property and unpaved road along east boundary.



3. Northeast portion of the Subject Property with north adjoining residences in background.



4. Irrigation standpipes on the northeast portion of the Subject Property.



5. Central north portion of the Subject Property.



6. West portion of the Subject Property.



7. South portion of the Subject Property.



8. East adjoining under construction residences.



9. Southeast adjoining residence and outbuildings.



10. South adjoining farm equipment storage area and stormwater basin.

APPENDIX B

HISTORICAL RESEARCH DOCUMENTATION

EXHIBIT B-1

AERIAL PHOTOGRAPHS

HISTORICAL AERIALS

Project Property: Millenium Estates
Lacey Blvd & 12 1/2 Avenue
Hanford CA

Project No: 25-17

Requested By: Paul Humphrey, REPA

Order No: 25020501302

Date Completed: February 07,2025

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

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Date	Source	Scale	Comments
2024	Maxar Technologies	1" = 500'	
2022	United States Department of Agriculture	1" = 500'	
2020	United States Department of Agriculture	1" = 500'	
2018	United States Department of Agriculture	1" = 500'	
2016	United States Department of Agriculture	1" = 500'	
2014	United States Department of Agriculture	1" = 500'	
2012	United States Department of Agriculture	1" = 500'	
2010	United States Department of Agriculture	1" = 500'	
2009	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
2004	United States Department of Agriculture	1" = 500'	
2003	United States Department of Agriculture	1" = 500'	
1994	United States Geological Survey	1" = 500'	
1986	United States Geological Survey	1" = 500'	
1976	United States Geological Survey	1" = 500'	
1966	Mcdonnell Douglas	1" = 500'	
1954	Army Mapping Service	1" = 500'	Best Copy Available
1942	Agricultural Stabilization & Conserv. Service	1" = 500'	
1934	Fairchild	1" = 500'	



Year: 2024
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

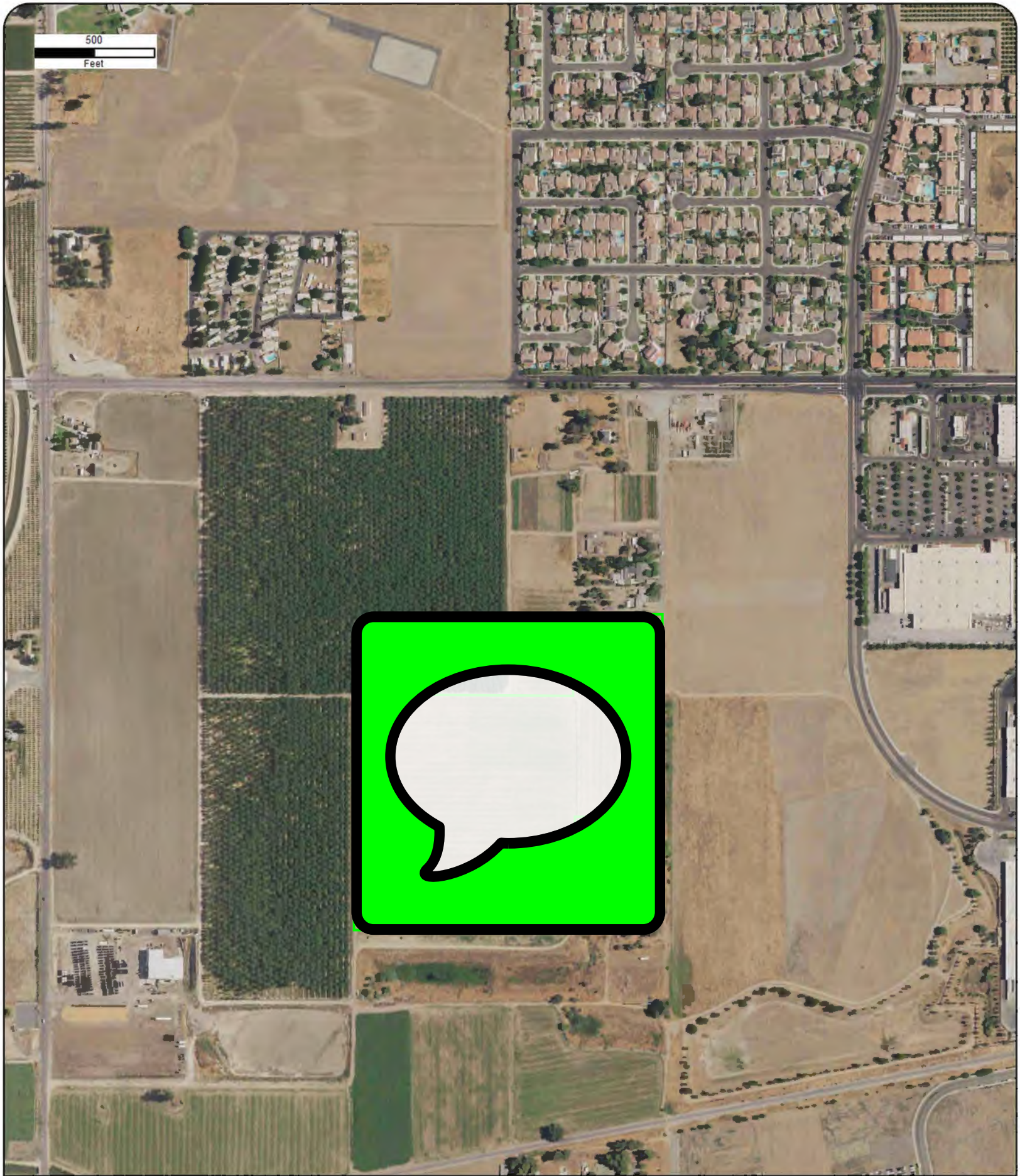


Year: 2022
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2020
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2018
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

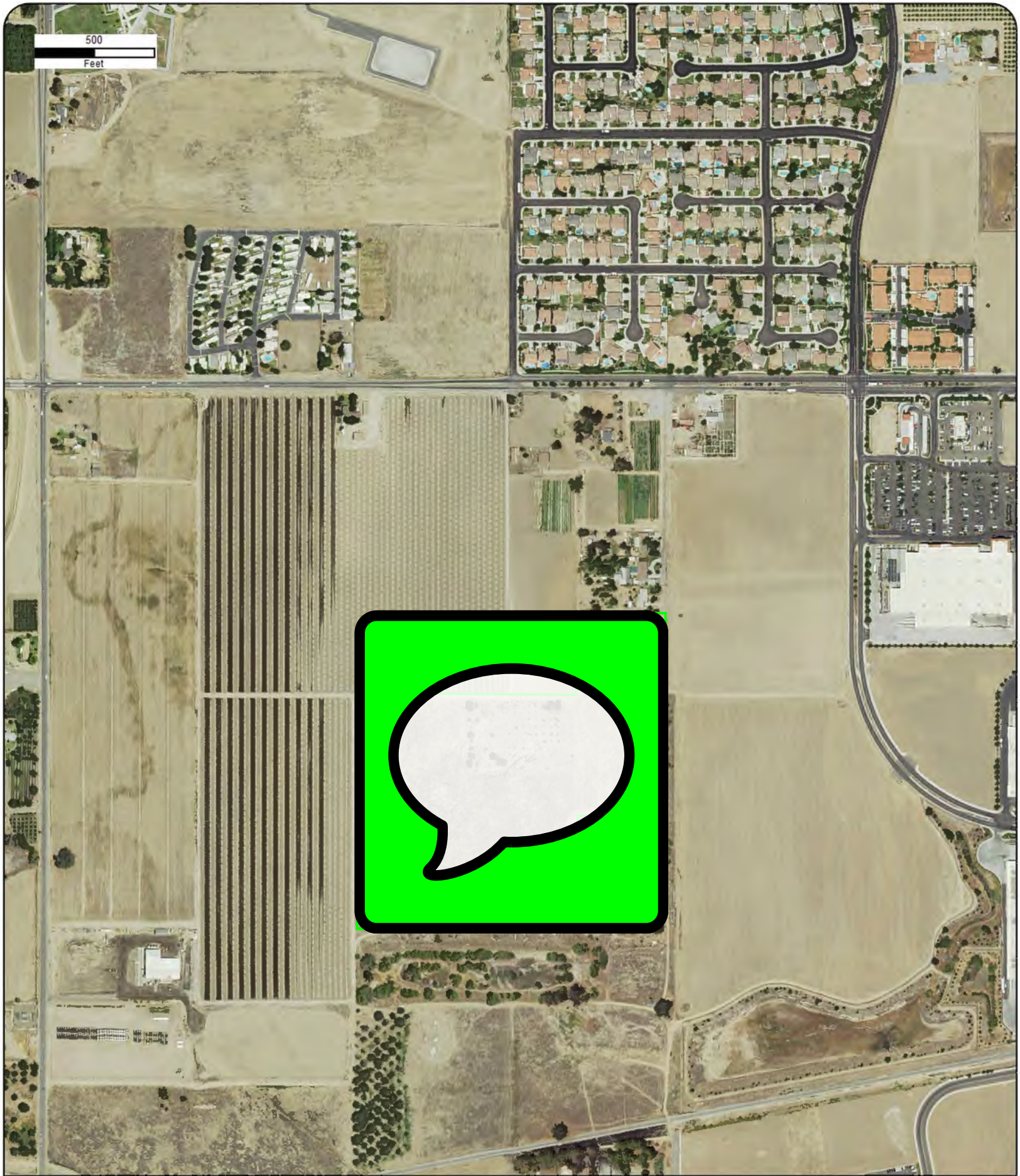


Year: 2016
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2014
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2012
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2010
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

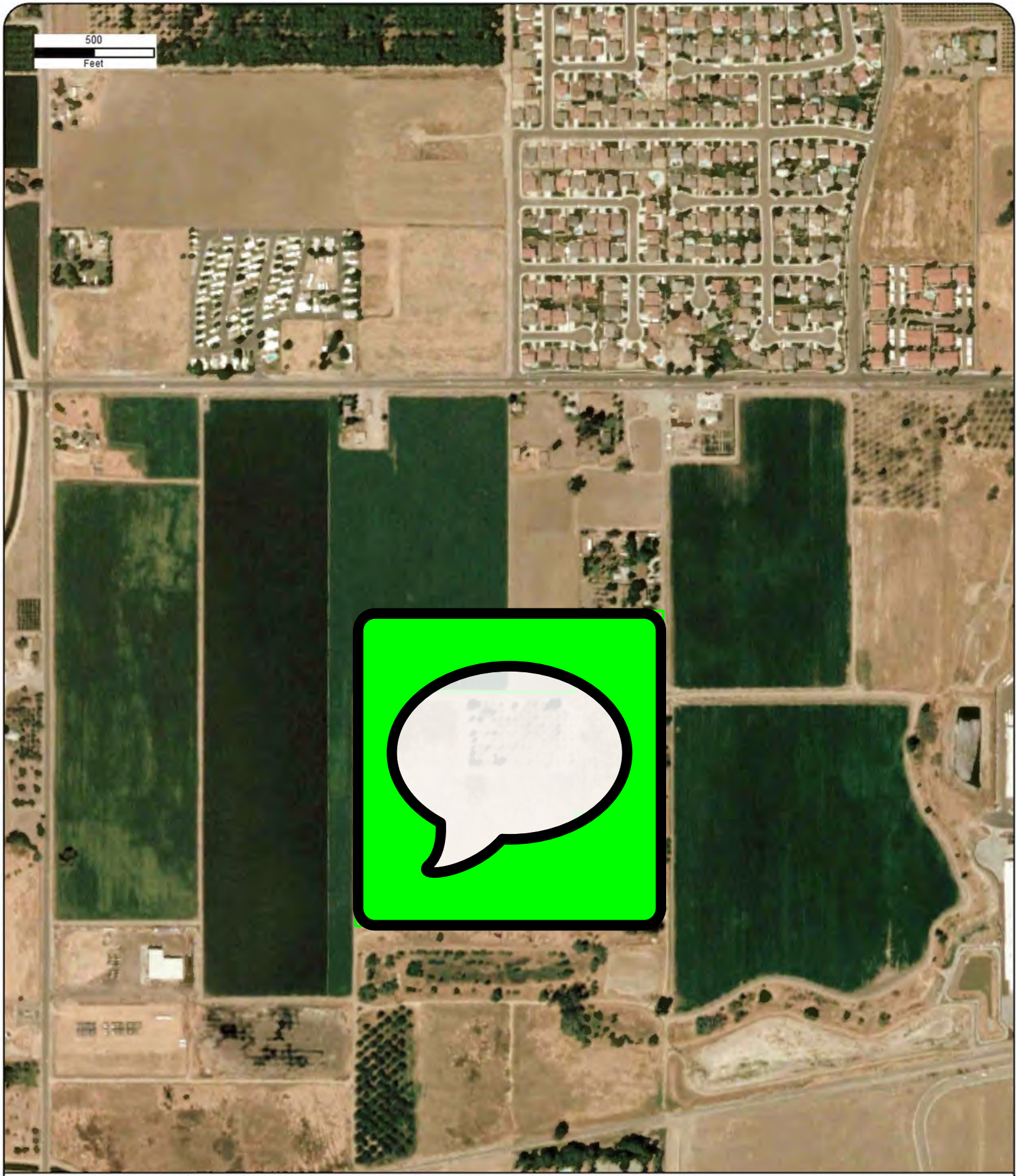


Year: 2009
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

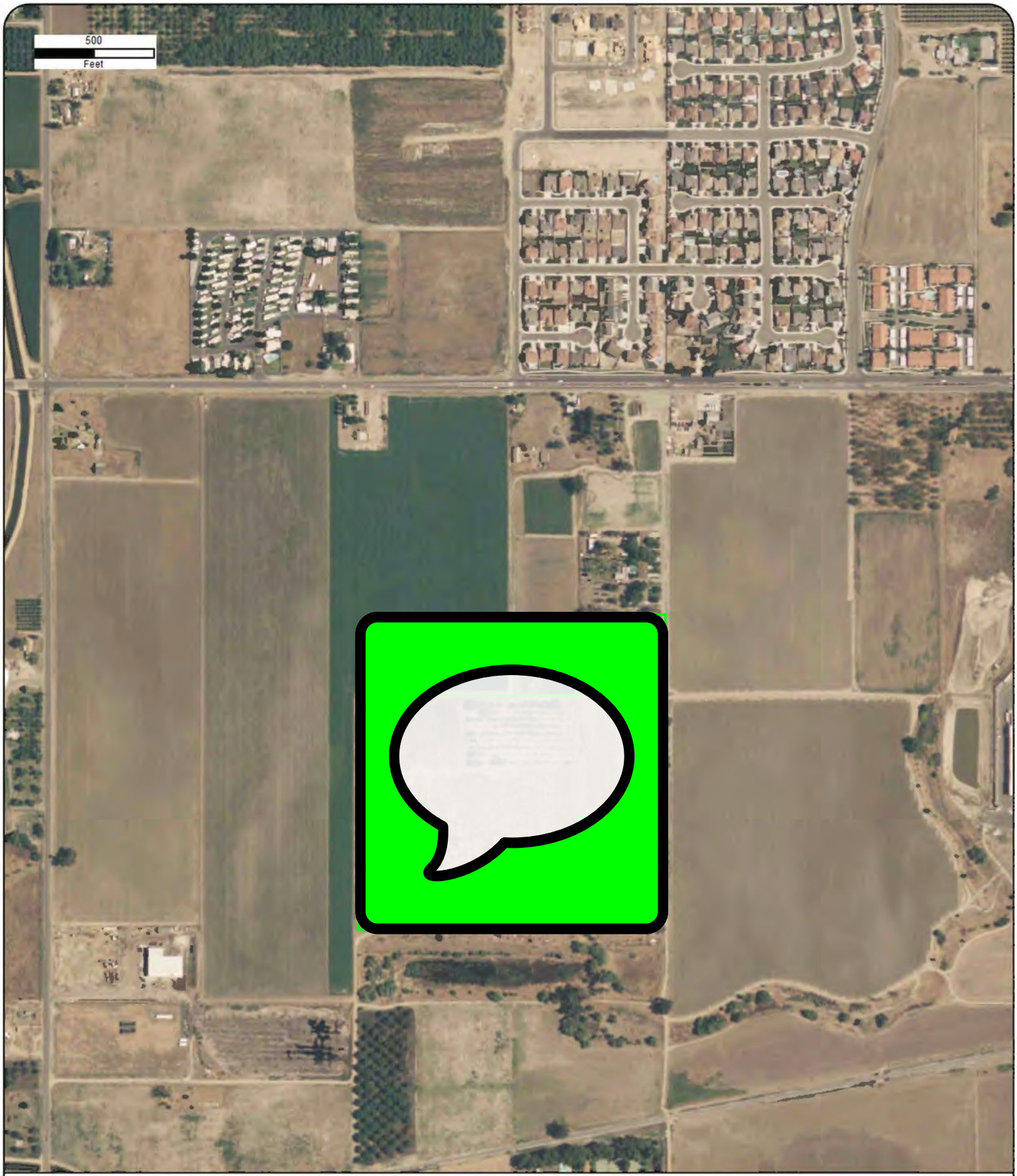


Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2004
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 2003
Source: USDA
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1994
Source: USGS
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1986
Source: USGS
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1976
Source: USGS
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1966
Source: MCDAC
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1954
Source: AMS
Scale: 1" = 500'
Comment: Best Copy Available

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

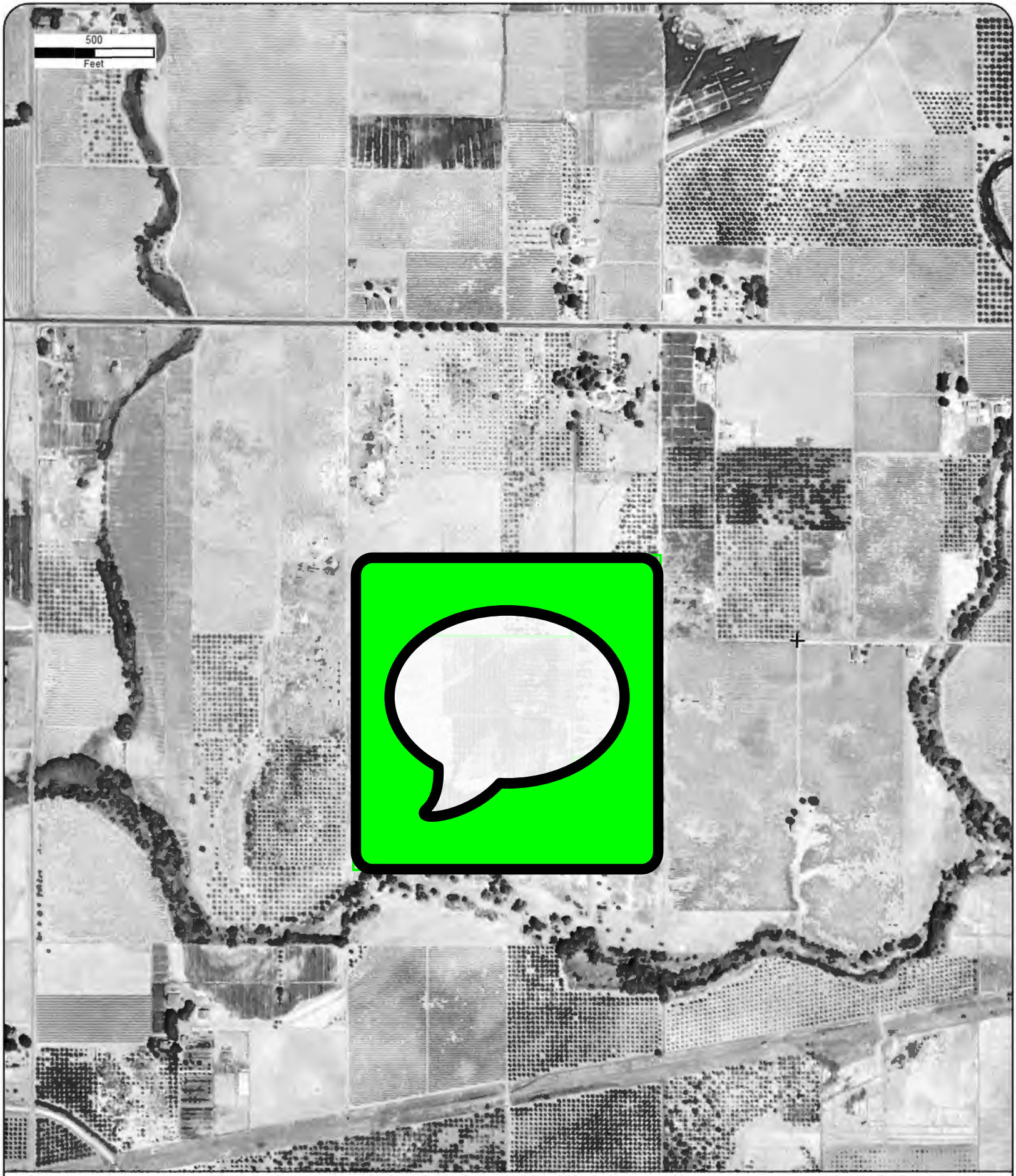


Year: 1942
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS



Year: 1934
Source: FAIRCHILD
Scale: 1" = 500'
Comment:

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA
Approx Center: -119.68424227,36.32346071

Order No: 25020501302

ERIS

APPENDIX C

REGULATORY RECORDS DOCUMENTATION

EXHIBIT C-1

MAPPED DATABASE REPORT

DATABASE REPORT

Project Property:	*Millenium Estates* *Lacey Blvd & 12 1/2 Avenue* *Hanford CA*
Project No:	*25-17*
Report Type:	*Database Report*
Order No:	*25020501302*
Requested by:	*Paul Humphrey, REPA*
Date Completed:	*February 7, 2025*

Environmental Risk Information Services
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Table of Contents

Table of Contents....2
Executive Summary....3
Executive Summary: Report Summary....4
Executive Summary: Site Report Summary - Project Property....9
Executive Summary: Site Report Summary - Surrounding Properties....10
Executive Summary: Summary by Data Source....12
Map....16
Aerial....19
Topographic Map....20
Detail Report....21
Unplottable Summary....83
Unplottable Report....84
Appendix: Database Descriptions....85
Definitions....104

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Executive Summary

Property Information:

Project Property: *Millenium Estates*
Lacey Blvd & 12 1/2 Avenue Hanford CA

Project No: *25-17*

Coordinates:

Latitude:	*36.32346071*
Longitude:	*-119.68424227*
UTM Northing:	*4,023,170.74*
UTM Easting:	*259,040.90*
UTM Zone:	*11S*

Elevation: *244 FT*

Order Information:

Order No:	*25020501302*
Date Requested:	*February 5, 2025*
Requested by:	*Paul Humphrey, REPA*
Report Type:	*Database Report*

Historicals/Products:

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
rr-NPL-aa NPL	Y	1	0	0	0	0	0	0
rr-PROPOSED NPL-aa PROPOSED NPL	Y	1	0	0	0	0	0	0
rr-DELETED NPL-aa DELETED NPL	Y	0.5	0	0	0	0	-	0
rr-SEMS-aa SEMS	Y	0.5	0	0	0	0	-	0
rr-ODI-aa ODI	Y	0.5	0	0	0	0	-	0
rr-SEMS ARCHIVE-aa SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
rr-CERCLIS-aa CERCLIS	Y	0.5	0	0	0	0	-	0
rr-IODI-aa IODI	Y	0.5	0	0	0	0	-	0
rr-CERCLIS NFRAP-aa CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
rr-CERCLIS LIENS-aa CERCLIS LIENS	Y	PO	0	-	-	-	-	0
rr-RCRA CORRACTS-aa RCRA CORRACTS	Y	1	0	0	0	0	0	0
rr-RCRA TSD-aa RCRA TSD	Y	0.5	0	0	0	**1**	-	**1**
rr-RCRA LQG-aa RCRA LQG	Y	0.25	0	0	0	-	-	0
rr-RCRA SQG-aa RCRA SQG	Y	0.25	0	0	**1**	-	-	**1**
rr-RCRA VSQG-aa RCRA VSQG	Y	0.25	0	0	0	-	-	0
rr-RCRA NON GEN-aa RCRA NON GEN	Y	0.25	0	0	**2**	-	-	**2**
rr-RCRA CONTROLS-aa RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
rr-FED ENG-aa FED ENG	Y	0.5	0	0	0	0	-	0
rr-FED INST-aa FED INST	Y	0.5	0	0	0	0	-	0
rr-LUCIS-aa LUCIS	Y	0.5	0	0	0	0	-	0
rr-NPL IC-aa NPL IC	Y	0.5	0	0	0	0	-	0
rr-ERNS 1982 TO 1986-aa ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
rr-ERNS 1987 TO 1989-aa ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
rr-ERNS-aa ERNS	Y	PO	0	-	-	-	-	0
rr-FED BROWNFIELDS-aa FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
rr-FEMA UST-aa FEMA UST	Y	0.25	0	0	0	-	-	0
rr-FRP-aa FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
rr_DELISTED FRP_aa DELISTED FRP	Y	0.25	0	0	0	-	-	0
rr_HIST GAS STATIONS_aa HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
rr_REFN_aa REFN	Y	0.25	0	0	0	-	-	0
rr_BULK TERMINAL_aa BULK TERMINAL	Y	0.25	0	0	0	-	-	0
rr_SEMS LIEN_aa SEMS LIEN	Y	PO	0	-	-	-	-	0
rr_SUPERFUND ROD_aa SUPERFUND ROD	Y	1	0	0	0	0	0	0
rr_DOE FUSRAP_aa DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
rr_RESPONSE_aa RESPONSE	Y	1	0	0	0	0	0	0
rr_ENVIROSTOR_aa ENVIROSTOR	Y	1	0	0	0	0	**1**	**1**
rr_DELISTED ENVS_aa DELISTED ENVS	Y	1	0	0	0	0	0	0
rr_SWF/LF_aa SWF/LF	Y	0.5	0	0	0	0	-	0
rr_SWRCB SWF_aa SWRCB SWF	Y	0.5	0	0	0	0	-	0
rr_WMUD_aa WMUD	Y	0.5	0	0	0	0	-	0
rr_HWP_aa HWP	Y	1	0	0	0	0	0	0
rr_SWAT_aa SWAT	Y	0.5	0	0	0	0	-	0
rr_C&D DEBRIS RECY_aa C&D DEBRIS RECY	Y	0.5	0	0	0	**3**	-	**3**
rr_RECYCLING_aa RECYCLING	Y	0.5	0	0	0	0	-	0
rr_PROCESSORS_aa PROCESSORS	Y	0.5	0	0	0	0	-	0
rr_CONTAINER RECY_aa CONTAINER RECY	Y	0.5	0	0	0	0	-	0
rr_LDS_aa LDS	Y	0.5	0	0	0	0	-	0
rr_LUST_aa LUST	Y	0.5	0	0	0	**2**	-	**2**
rr_DELISTED LST_aa DELISTED LST	Y	0.5	0	0	0	0	-	0
rr_UST_aa UST	Y	0.25	0	0	0	-	-	0
rr_UST CLOSURE_aa UST CLOSURE	Y	0.5	0	0	0	0	-	0
rr_HHSS_aa HHSS	Y	0.25	0	**1**	0	-	-	**1**
rr_UST SWEEPS_aa UST SWEEPS	Y	0.25	0	0	0	-	-	0
rr_AST_aa AST	Y	0.25	0	0	0	-	-	0
rr_AST SWRCB_aa AST SWRCB	Y	0.25	0	0	0	-	-	0
rr_TANK OIL GAS_aa TANK OIL GAS	Y	0.25	0	0	0	-	-	0
rr_DELISTED TNK_aa DELISTED TNK	Y	0.25	0	0	0	-	-	0
rr_CERS TANK_aa CERS TANK	Y	0.25	0	0	**1**	-	-	**1**
rr_DELISTED CTNK_aa DELISTED CTNK	Y	0.25	0	0	0	-	-	0
rr_HIST TANK_aa HIST TANK	Y	0.25	0	**1**	0	-	-	**1**

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
rr_LUR_aa LUR	Y	0.5	0	0	0	0	-	0
rr_CALSITES_aa CALSITES	Y	0.5	0	0	0	0	-	0
rr_HLUR_aa HLUR	Y	0.5	0	0	0	0	-	0
rr_DEED_aa DEED	Y	0.5	0	0	0	0	-	0
rr_VCP_aa VCP	Y	0.5	0	0	0	0	-	0
rr_CLEANUP_SITES_aa CLEANUP SITES	Y	0.5	0	0	0	**1**	-	**1**
rr_DELISTED_CLEANUP_aa DELISTED CLEANUP	Y	0.5	0	0	0	0	-	0
rr_DELISTED_COUNTY_aa DELISTED COUNTY	Y	0.25	0	0	0	-	-	0
Tribal								
rr_INDIAN_LUST_aa INDIAN LUST	Y	0.5	0	0	0	0	-	0
rr_INDIAN_UST_aa INDIAN UST	Y	0.25	0	0	0	-	-	0
rr_DELISTED_INDIAN_LST_aa DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
rr_DELISTED_INDIAN_UST_aa DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County								
rr_UST_KINGS_aa UST KINGS	Y	0.25	0	0	0	-	-	0
rr_CUPA_KINGS_aa CUPA KINGS	Y	0.25	0	0	**1**	-	-	**1**
Additional Environmental Records								
Federal								
rr_PFAS_GHG_aa PFAS GHG	Y	0.5	0	0	0	0	-	0
rr_OSC_RESPONSE_aa OSC RESPONSE	Y	0.125	0	0	-	-	-	0
rr_FINDS/FRS_aa FINDS/FRS	Y	PO	0	-	-	-	-	0
rr_TRIS_aa TRIS	Y	PO	0	-	-	-	-	0
rr_PFAS_NPL_aa PFAS NPL	Y	0.5	0	0	0	0	-	0
rr_PFAS_FED_SITES_aa PFAS FED SITES	Y	0.5	0	0	0	0	-	0
rr_PFAS_SSEHRI_aa PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
rr_PFAS_ERNS_aa PFAS ERNS	Y	0.5	0	0	0	0	-	0
rr_PFAS_NPDES_aa PFAS NPDES	Y	0.5	0	0	0	0	-	0
rr_PFAS_TRI_aa PFAS TRI	Y	0.5	0	0	0	0	-	0
rr_PFAS_WATER_aa PFAS WATER	Y	0.5	0	0	0	0	-	0
rr_PFAS_TSCA_aa PFAS TSCA	Y	0.5	0	0	0	0	-	0
rr_PFAS_E-MANIFEST_aa PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
rr_PFAS_IND_aa PFAS IND	Y	0.5	0	0	0	0	-	0
rr_HMIRS_aa HMIRS	Y	0.125	0	0	-	-	-	0
rr_NCDL_aa NCDL	Y	0.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
rr TSCA aa TSCA	Y	0.125	0	0	-	-	-	0
rr HIST TSCA aa HIST TSCA	Y	0.125	0	0	-	-	-	0
rr FTTS ADMIN aa FTTS ADMIN	Y	PO	0	-	-	-	-	0
rr FTTS INSP aa FTTS INSP	Y	PO	0	-	-	-	-	0
rr PRP aa PRP	Y	PO	0	-	-	-	-	0
rr SCRD DRYCLEANER aa SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
rr ICIS aa ICIS	Y	PO	0	-	-	-	-	0
rr FED DRYCLEANERS aa FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
rr DELISTED FED DRY aa DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
rr FUDS aa FUDS	Y	1	0	0	0	0	0	0
rr FUDS MRS aa FUDS MRS	Y	1	0	0	0	0	0	0
rr FORMER NIKE aa FORMER NIKE	Y	1	0	0	0	0	0	0
rr PIPELINE INCIDENT aa PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
rr MLTS aa MLTS	Y	PO	0	-	-	-	-	0
rr HIST MLTS aa HIST MLTS	Y	PO	0	-	-	-	-	0
rr MINES aa MINES	Y	0.25	0	0	0	-	-	0
rr SMCRA aa SMCRA	Y	1	0	0	0	0	0	0
rr MRDS aa MRDS	Y	1	0	0	0	0	0	0
rr LM SITES aa LM SITES	Y	1	0	0	0	0	0	0
rr ALT FUELS aa ALT FUELS	Y	0.25	0	0	0	-	-	0
rr CONSENT DECREES aa CONSENT DECREES	Y	0.25	0	0	0	-	-	0
rr AFS aa AFS	Y	PO	0	-	-	-	-	0
rr SSTS aa SSTS	Y	0.25	0	0	0	-	-	0
rr PCBT aa PCBT	Y	0.5	0	0	0	0	-	0
rr PCB aa PCB	Y	0.5	0	0	0	0	-	0
rr POWER PLANTS aa POWER PLANTS	Y	0.125	0	0	-	-	-	0
State								
rr PFAS SAMPLING aa PFAS SAMPLING	Y	0.5	0	0	0	0	-	0
rr DRYCLEANERS aa DRYCLEANERS	Y	0.25	0	0	0	-	-	0
rr DELISTED DRYCLEANERS aa DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
rr DRYC GRANT aa DRYC GRANT	Y	0.25	0	0	0	-	-	0
rr PFAS GT CLEANUPS aa PFAS GT CLEANUPS	Y	0.5	0	0	0	0	-	0
rr PFAS GW aa PFAS GW	Y	0.5	0	0	0	0	-	0
rr PFAS INVEST aa PFAS INVEST	Y	0.5	0	0	0	0	-	0
rr HWSS CLEANUP aa HWSS CLEANUP	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
r.TOXIC PITS.aa TOXIC PITS	Y	1	0	0	0	0	0	0
r.DTSC HWF.aa DTSC HWF	Y	0.5	0	0	0	0	-	0
r.INSP COMP ENF.aa INSP COMP ENF	Y	1	0	0	0	0	0	0
r.SCH.aa SCH	Y	1	0	0	0	0	0	0
r.CHMIRS.aa CHMIRS	Y	PO	0	-	-	-	-	0
r.HIST CHMIRS.aa HIST CHMIRS	Y	PO	0	-	-	-	-	0
r.HAZNET.aa HAZNET	Y	PO	0	-	-	-	-	0
r.HAZ GEN.aa HAZ GEN	Y	PO	0	-	-	-	-	0
r.HAZ TSD.aa HAZ TSD	Y	0.5	0	0	0	0	-	0
r.HIST MANIFEST.aa HIST MANIFEST	Y	PO	0	-	-	-	-	0
r.HW TRANSPORT.aa HW TRANSPORT	Y	0.125	0	0	-	-	-	0
r.WASTE TIRE.aa WASTE TIRE	Y	PO	0	-	-	-	-	0
r.MEDICAL WASTE.aa MEDICAL WASTE	Y	0.25	0	0	0	-	-	0
r.HIST CORTESE.aa HIST CORTESE	Y	0.5	0	0	0	0	-	0
r.CDO/CAO.aa CDO/CAO	Y	0.5	0	0	0	0	-	0
r.CERS HAZ.aa CERS HAZ	Y	0.125	0	0	-	-	-	0
r.DELISTED HAZ.aa DELISTED HAZ	Y	0.5	0	0	0	**1**	-	**1**
r.GEOTRACKER.aa GEOTRACKER	Y	0.125	0	0	-	-	-	0
r.MINE.aa MINE	Y	1	0	0	0	0	0	0
r.LIEN.aa LIEN	Y	PO	0	-	-	-	-	0
r.WASTE DISCHG.aa WASTE DISCHG	Y	0.25	0	0	0	-	-	0
r.EMISSIONS.aa EMISSIONS	Y	0.25	0	0	**3**	-	-	**3**
r.CDL.aa CDL	Y	0.125	0	0	-	-	-	0

Tribal ***No Tribal additional environmental record sources available for this State.***

County

Total:	*0*	***2***	***8***	***8***	***1***	***19***

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
m1d 1	HHSS	WL WINTERBERG FRAM	12501 LACEY HANFORD CA 93230	NNE	0.01 / 40.28	1	21
m1d 1	HIST TANK	W.L. WINTERBERG FARM	12501 LACEY HANFORD CA	NNE	0.01 / 40.28	1	21
m2d 2	EMISSIONS	LOWE'S HIW INC	LACEY BLVD AND CENTENNIAL HANFORD CA 93230	NE	0.16 / 838.65	2	21
m2d 2	EMISSIONS	LOWE'S HIW INC	LACEY BLVD & CENTENNIAL HANFORD CA 93230	NE	0.16 / 838.65	2	23
m3d 3	CUPA KINGS	TRI-COUNTIES WALNUTS, INC.	10493 13TH AVE HANFORD CA 93230	WSW	0.19 / 1,014.45	0	26
m3d 3	EMISSIONS	TRI-COUNTIES WALNUT CO	10493 13TH AVE HANFORD CA 93230	WSW	0.19 / 1,014.45	0	27
m3d 3	RCRA NON GEN	TRI COUNTY WALNUT INC	10493 13TH AVE HANFORD CA 93230-9208	WSW	0.19 / 1,014.45	0	35
			EPA Handler ID | Recycler Activity?: CAL000450182 | NO				
m4d 4	RCRA NON GEN	CWP CALIFORNIA CORP DBA MISTER CAR WASH	1981 W LACEY BLVD HANFORD CA 93230	NE	0.20 / 1,079.59	1	36
			EPA Handler ID | Recycler Activity?: CAL000449833 | NO				
m5d 5	CERS TANK	Lowe's #2215	1955 W LACEY BLVD HANFORD CA 93230	NE	0.23 / 1,214.00	1	37
			Site ID: 45246				
m5d 5	RCRA SQG	LOWE'S OF HANFORD #2215	1955 WEST LACEY BLVD HANFORD CA 93230	NE	0.23 / 1,214.00	1	41
			EPA Handler ID: CAR000280131				
m6d 6	RCRA TSD	AMERICAN SMOG SHOP	12758 LACEY BLVD HANFORD CA 93230-9233	NNW	0.26 / 1,365.54	0	52
			EPA Handler ID | Recycler Activity?: CAL000364458 | YES				
m7d 7	CLEANUP SITES	Southern California Edison Former Grangeville Substation	13th Avenue Hanford CA 93230	WSW	0.28 / 1,467.93	-1	53

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Global ID: T10000011360				
mid 8	C&D DEBRIS RECY	HANFORD HYUNDAI	1990 GLENDALE AVE HANFORD CA 93230	SE	0.34 / 1,793.45	2	63
mid 9	C&D DEBRIS RECY	PEP BOYS #859	1840 W LACEY BLVD HANFORD CA 93230	NE	0.35 / 1,828.03	0	63
mid 10	DELISTED HAZ	SCE Grangeville Substation	FRONT ST & 13TH AVE HANFORD CA 93230	SW	0.35 / 1,859.33	-2	63
mid 11	C&D DEBRIS RECY	O'REILLY AUTO PARTS #3632	112 N 12TH AVE HANFORD CA 93230	E	0.44 / 2,339.74	2	63
mid 12	LUST	VERBERG BROS., INC.	12778 HANFORD - ARMONA RD HANFORD CA 93230 ***Global ID | Status:*** T0603100122 |	SSW	0.49 / 2,603.14	-1	63
mid 13	LUST	KRAZAN SITE	1702 LACEY BLVD HANFORD CA 93230 ***Global ID | Status:*** T0603100143 |	ENE	0.50 / 2,625.66	0	78
mid 14	ENVIROSTOR	CANADY 13TH AVENUE SITE	9431 13TH AVENUE HANFORD CA 93230 ***Estor/EPA ID | Cleanup Status:*** 16010001 | NO FURTHER ACTION AS OF 8/29/1995	NNW	0.91 / 4,821.16	3	81

Executive Summary: Summary by Data Source

Standard

Federal

RCRA TSD - RCRA non-CORRACTS TSD Facilities

A search of the RCRA TSD database, dated Oct 21, 2024 has found that there are 1 RCRA TSD site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
AMERICAN SMOG SHOP	12758 LACEY BLVD HANFORD CA 93230-9233	NNW	0.26 / 1,365.54	m-6-877576875-a
	***EPA Handler ID | Recycler Activity?**: CAL000364458 | YES*			

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Oct 21, 2024 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
LOWE'S OF HANFORD #2215	1955 WEST LACEY BLVD HANFORD CA 93230	NE	0.23 / 1,214.00	m-5-867211515-a
	***EPA Handler ID**: CAR000280131*			

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Oct 21, 2024 has found that there are 2 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TRI COUNTY WALNUT INC	10493 13TH AVE HANFORD CA 93230-9208	WSW	0.19 / 1,014.45	m-3-879464275-a
	***EPA Handler ID | Recycler Activity?**: CAL000450182 | NO*			
CWP CALIFORNIA CORP DBA MISTER CAR WASH	1981 W LACEY BLVD HANFORD CA 93230	NE	0.20 / 1,079.59	m-4-879461914-a
	***EPA Handler ID | Recycler Activity?**: CAL000449833 | NO*			

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Sep 25, 2024 has found that there are 1 ENVIROSTOR site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CANADY 13TH AVENUE SITE	9431 13TH AVENUE HANFORD CA 93230	NNW	0.91 / 4,821.16	m-14-866001165-a

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key

***Estor/EPA ID** | **Cleanup Status**: 16010001 | NO FURTHER ACTION AS OF 8/29/1995*

C&D DEBRIS RECY - Construction and Demolition Debris Recyclers

A search of the C&D DEBRIS RECY database, dated Jun 20, 2018 has found that there are 3 C&D DEBRIS RECY site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
HANFORD HYUNDAI	1990 GLENDALE AVE HANFORD CA 93230	SE	0.34 / 1,793.45	m-8-891200386-a
PEP BOYS #859	1840 W LACEY BLVD HANFORD CA 93230	NE	0.35 / 1,828.03	m-9-891195183-a
O'REILLY AUTO PARTS #3632	112 N 12TH AVE HANFORD CA 93230	E	0.44 / 2,339.74	m-11-891198476-a

LUST - Leaking Underground Fuel Tank Reports

A search of the LUST database, dated Sep 25, 2024 has found that there are 2 LUST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
KRAZAN SITE	1702 LACEY BLVD HANFORD CA 93230	ENE	0.50 / 2,625.66	m-13-820198001-a

***Global ID** | **Status**: T0603100143 |*

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
VERBERG BROS., INC.	12778 HANFORD - ARMONA RD HANFORD CA 93230	SSW	0.49 / 2,603.14	m-12-820187161-a

***Global ID** | **Status**: T0603100122 |*

HHSS - Historical Hazardous Substance Storage Information Database

A search of the HHSS database, dated Aug 27, 2015 has found that there are 1 HHSS site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
WL WINTERBERG FRAM	12501 LACEY HANFORD CA 93230	NNE	0.01 / 40.28	m-1-822952169-a

CERS TANK - California Environmental Reporting System (CERS) Tanks

A search of the CERS TANK database, dated Oct 28, 2024 has found that there are 1 CERS TANK site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Lowe's #2215	1955 W LACEY BLVD HANFORD CA 93230 ***Site ID**: 45246*	NE	0.23 / 1,214.00	m-5-861338804-a

HIST TANK - Historical Hazardous Substance Storage Container Information - Facility Summary

A search of the HIST TANK database, dated May 27, 1988 has found that there are 1 HIST TANK site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
W.L. WINTERBERG FARM	12501 LACEY HANFORD CA	NNE	0.01 / 40.28	m-1-865047696-a

CLEANUP SITES - GeoTracker Cleanup Program Sites

A search of the CLEANUP SITES database, dated Sep 25, 2024 has found that there are 1 CLEANUP SITES site(s) within approximately 0.50miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Southern California Edison Former Grangeville Substation	13th Avenue Hanford CA 93230 ***Global ID**: T10000011360*	WSW	0.28 / 1,467.93	m-7-866521697-a

County

CUPA KINGS - Kings County - CUPA Facility List

A search of the CUPA KINGS database, dated Dec 3, 2020 has found that there are 1 CUPA KINGS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TRI-COUNTIES WALNUTS, INC.	10493 13TH AVE HANFORD CA 93230	WSW	0.19 / 1,014.45	m-3-820291438-a

Non Standard

State

DELISTED HAZ - Delisted Environmental Reporting System (CERS) Hazardous Waste Sites

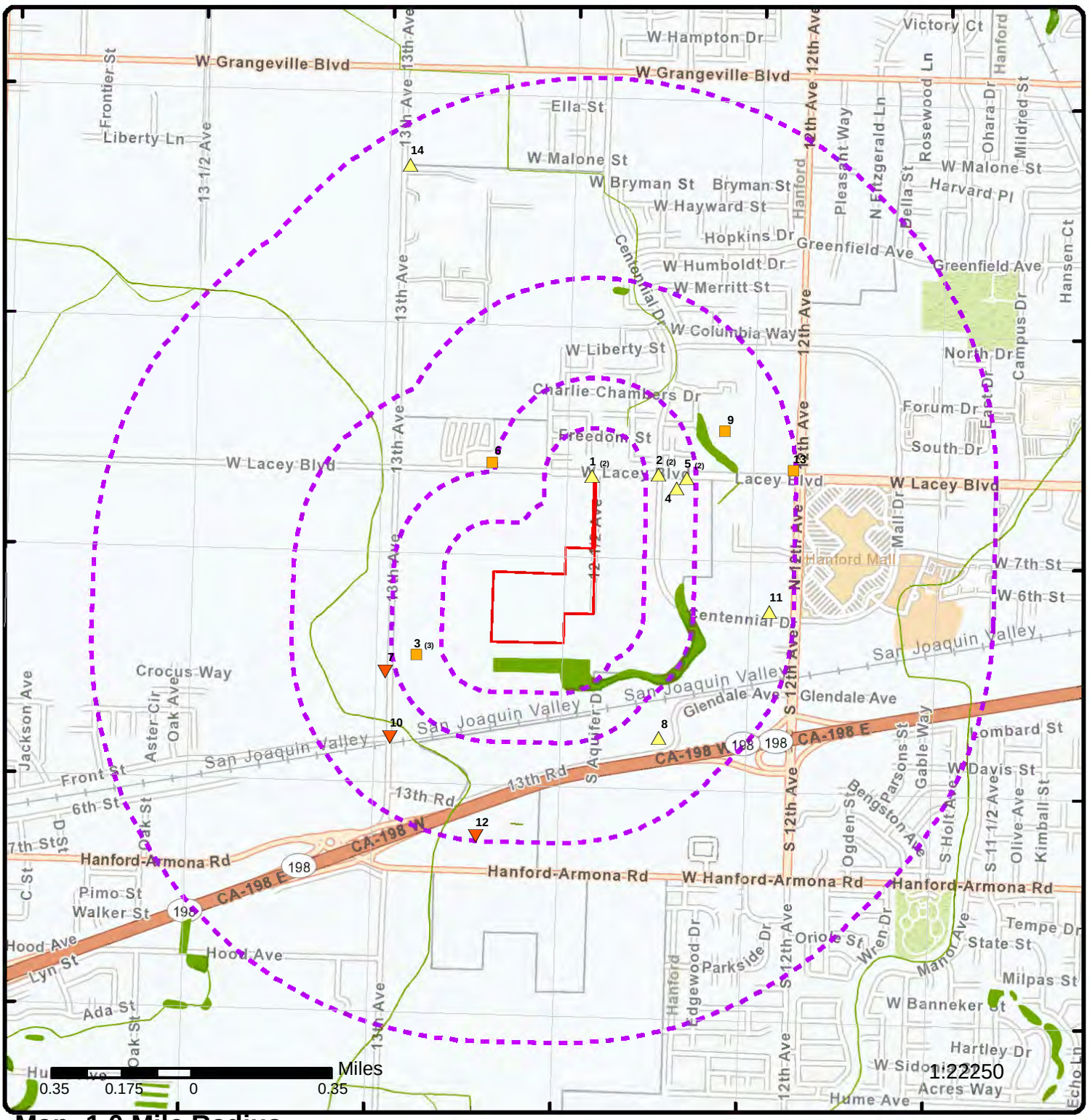
A search of the DELISTED HAZ database, dated Nov 29, 2018 has found that there are 1 DELISTED HAZ site(s) within approximately 0.50miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
SCE Grangeville Substation	FRONT ST & 13TH AVE HANFORD CA 93230	SW	0.35 / 1,859.33	m-10-862148917-a

EMISSIONS - Toxic Pollutant Emissions Facilities

A search of the EMISSIONS database, dated Dec 31, 2021 has found that there are 3 EMISSIONS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
LOWE'S HIW INC	LACEY BLVD & CENTENNIAL HANFORD CA 93230	NE	0.16 / 838.65	m-2-861253716-a
LOWE'S HIW INC	LACEY BLVD AND CENTENNIAL HANFORD CA 93230	NE	0.16 / 838.65	m-2-861210921-a
TRI-COUNTIES WALNUT CO	10493 13TH AVE HANFORD CA 93230	WSW	0.19 / 1,014.45	m-3-861270666-a



Map: 1.0 Mile Radius

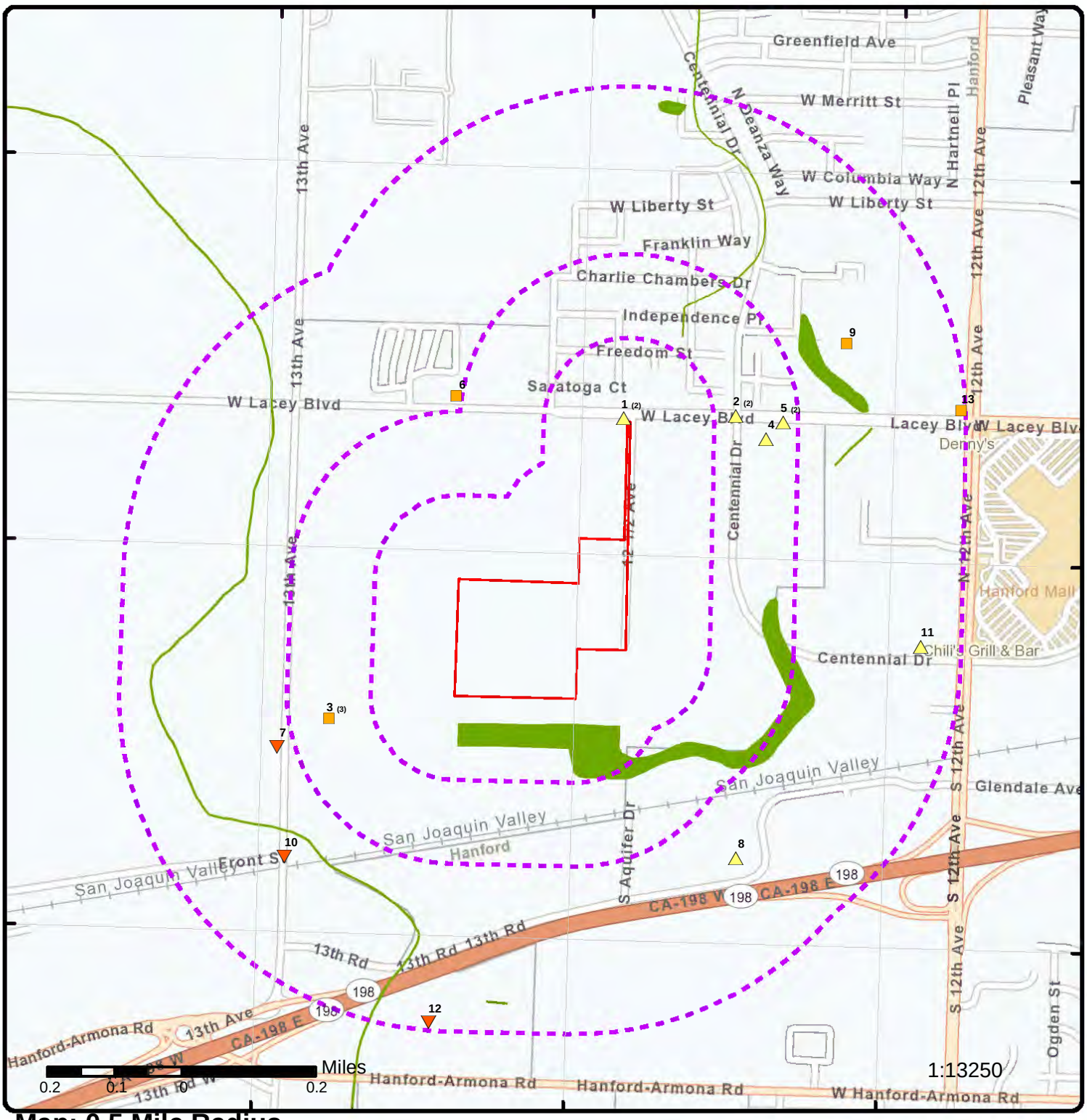
Order Number: 25020501302

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Map: 0.5 Mile Radius

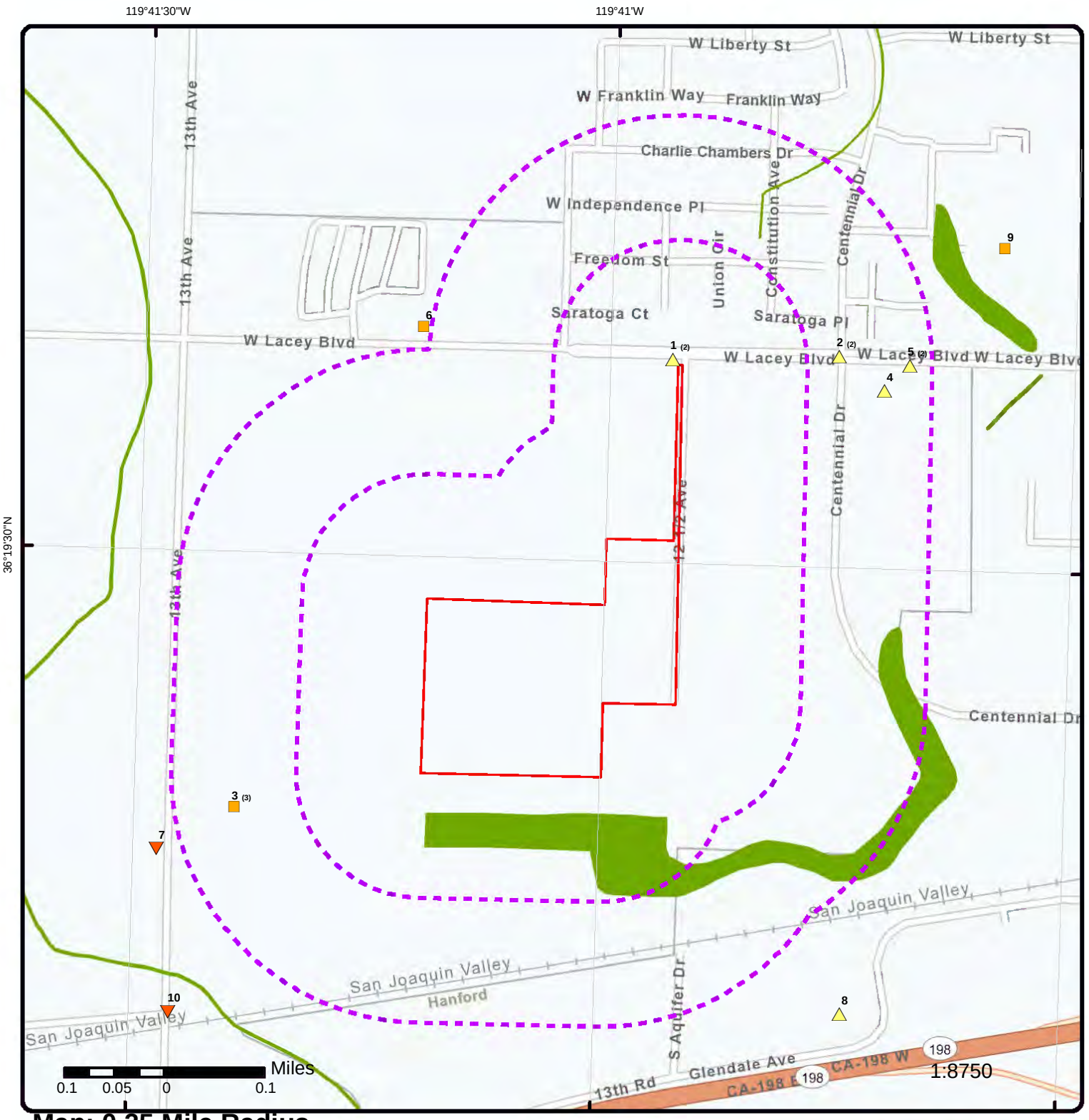
Order Number: 25020501302

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Map: 0.25 Mile Radius

Order Number: 25020501302

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



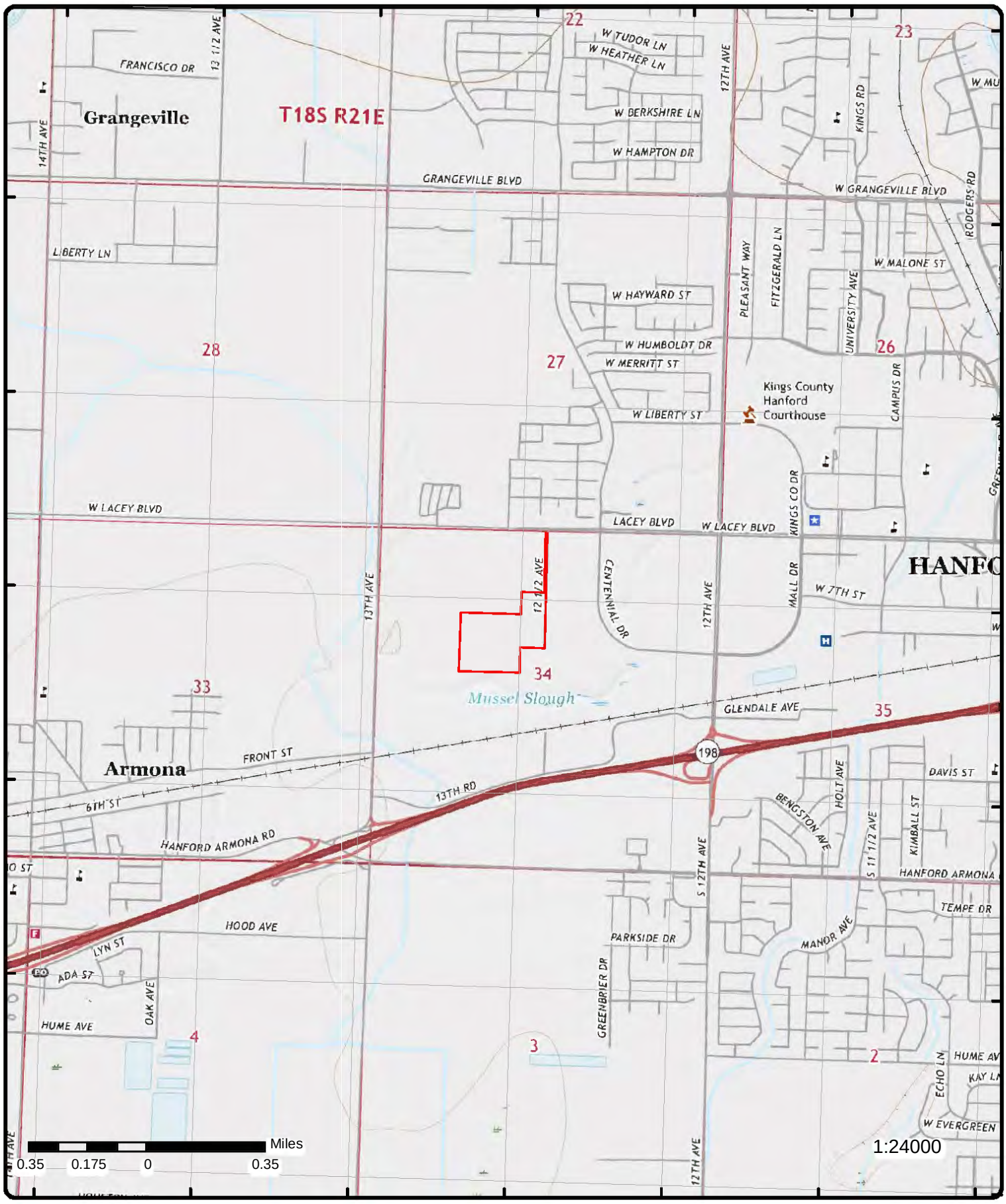
Aerial **Year: 2024**

Order Number: 25020501302

Address: Lacey Blvd & 12 1/2 Avenue, Hanford, CA

Source: ESRI World Imagery

© ERIS Information Inc.



Topographic Map

Year: 2021

Order Number: 25020501302

Address: Lacey Blvd & 12 1/2 Avenue, CA

Quadrangle(s): Hanford CA

Source: USGS Topographic Map

© ERIS Information Inc.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
m-1-822952169-b 1	1 of2	NNE	0.01 / 40.28	244.78 / 1	WL WINTERBERG FRAM 12501 LACEY HANFORD CA 93230	dd-HHSS-822952169-bb p1p-822952169-v1v HHSS

County: Kings
Tank Details Microfiche: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00025796.pdf

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
m-1-865047696-b 1	2 of2	NNE	0.01 / 40.28	244.78 / 1	W.L. WINTERBERG FARM 12501 LACEY HANFORD CA	dd-HIST TANK-865047696-bb p1p-865047696-v1v HIST TANK

Owner Name: W.L. WINTERBERG
Owner Street: 12501 LACEY
Owner City: HANFORD
Owner State: CA
Owner Zip: 93230
No of Containers: 2
County: KINGS
Facility State: CA
Facility Zip: 93230

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
m-2-861210921-b 2	1 of2	NE	0.16 / 838.65	245.26 / 2	LOWE'S HIW INC LACEY BLVD AND CENTENNIAL HANFORD CA 93230	dd-EMISSIONS-861210921-bb p1p-861210921-v1v EMISSIONS

2009 Criteria Data

Facility ID: 7585
Facility SIC Code: 5722
CO: 16
Air Basin: SJV
District: SJU
COID: KIN
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:
TOGT: .0013374040809115931636189793235329269975021
ROGT: .00111900599449873
COT: .00498833997547627
NOXT: .0151402859255672
SOXT: .0000285818398594856
PMT: .0007459303242017008196721311475409836006557
PM10T: .00072802799642086

2009 Toxic Data

Facility ID: 7585
Facility SIC Code: 5722
CO: 16
Air Basin: SJV
District: SJU
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
COID: KIN
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:

2010 Toxic Data

Facility ID: 7585
COID: KIN

Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2011 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	.00218416873227171985179873311820246205 3304
CO:	16	***ROGT:***	.001827493978291748
Air Basin:	SJV	***COT:***	.00814665990322829
District:	SJU	***NOXT:***	.0247262137062847
COID:	KIN	***SOXT:***	.0000466781594455242
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.00121820900192270491803278688524590163 9344
CHAPIS:		***PM10T:***	.00118897198587656

2011 Toxic Data

Facility ID:	7585	***COID:***	KIN
Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2012 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	.00218416873227171985179873311820246205 3304
CO:	16	***ROGT:***	.001827493978291748
Air Basin:	SJV	***COT:***	.00814665990322829
District:	SJU	***NOXT:***	.0247262137062847
COID:	KIN	***SOXT:***	.0000466781594455242
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.00121820900192270491803278688524590163 9344
CHAPIS:		***PM10T:***	.00118897198587656

2012 Toxic Data

Facility ID:	7585	***COID:***	KIN
Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

2013 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	.00235628912919749573136027319294251565 1679
CO:	16	***ROGT:***	.00207
Air Basin:	SJV	***COT:***	.00922
District:	SJU	***NOXT:***	.028
COID:	KIN	***SOXT:***	.0000529
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.00138319672131147540983606557377049180 3279
CHAPIS:		***PM10T:***	.00135

2013 Toxic Data

Facility ID:	7585	***COID:***	KIN
Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

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m-2-861253716-b **2** | ***2 of2*** | ***NE*** | ***0.16 / 838.65*** | ***245.26 / 2*** | ***LOWE'S HIW INC***
LACEY BLVD & CENTENNIAL
HANFORD CA 93230 | dd-EMISSIONS-861253716-bb d1n-861253716-jv1v ***EMISSIONS***

2014 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	.00195571999863324985771200910643141718 8389
CO:	16	***ROGT:***	.00171810001879931
Air Basin:	SJV	***COT:***	.00765900008380413
District:	SJU	***NOXT:***	.0232461002543569
COID:	KIN	***SOXT:***	.000043884000480175
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.00114528689777753073770491803278688524 5902
CHAPIS:		***PM10T:***	.00111780001223087

2014 Toxic Data

Facility ID:	7585	***COID:***	KIN
Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2015 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	.

			00236767216846898121798520204894706886 7388
CO:	16	***ROGT:***	.00208
Air Basin:	SJV	***COT:***	.00928
District:	SJU	***NOXT:***	.0282
COID:	KIN	***SOXT:***	.0000532
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	. 00138319672131147540983606557377049180 3279
CHAPIS:		***PM10T:***	.00135

2015 Toxic Data

Facility ID:	7585	***COID:***	KIN
Facility SIC Code:	5722	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2016 Criteria Data

Facility ID:	7585	***CERR CODE:***	
Facility SIC Code:	5722	***TOGT:***	. 00140011383039271485486624928856004553 2157
CO:	16	***ROGT:***	.00123
Air Basin:	SJV	***COT:***	.00549
District:	SJU	***NOXT:***	.0167
COID:	KIN	***SOXT:***	.0000315
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	. 00082172131147540983606557377049180327 8689
CHAPIS:		***PM10T:***	.000802

2016 Toxic Data

Facility ID:	7585	***TS:***	
Facility SIC Code:	5722	***HRA:***	
CERR CODE:		***CH Index:***	
COID:	KIN	***AH Index:***	
CO:	16	***Air Basin:***	SJV
DISN:	SAN JOAQUIN VALLEY APCD	***District:***	SJU
CHAPIS:			

2017 Criteria Data

Facility ID:	7585	***CERR Code:***	
Facility SIC Code:	5722	***TOGT:***	. 00140011383039271485486624928856004553 2157
CO:	16	***ROGT:***	.000885
Air Basin:	SJV	***COT:***	.00395
District:	SJU	***NOXT:***	.011976795
COID:	KIN	***SOXT:***	.0000226
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	. 00082172131147540983606557377049180327 8689
CHAPIS:		***PM10T:***	.000576

2017 Toxic Data

Facility ID: 7585
Facility SIC Code: 5722
CO: 16
Air Basin: SJV
District: SJU
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
COID: KIN
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:

2018 Criteria Data

Facility ID: 7585
Facility SIC Code: 5722
CO: 16
Air Basin: SJV
District: SJU
COID: KIN
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:
TOGT: .00334433693796243597040409789413773477 5185
ROGT: .002938
COT: .01311
NOXT: .03975
SOXT: .0000751
PMT: .00192555331991951710261569416498993963 7827
PM10T: .001914

2018 Toxic Data

Facility ID: 7585
Facility SIC Code: 5722
CO: 16
Air Basin: SJV
District: SJU
TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
COID: KIN
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:

2019 Criteria Data

CO: 16
Air Basin: SJV
Facility ID: 7585
District: SJU
Facility SIC Code: 5722
CO ID: KIN
DISN: SAN JOAQUIN VALLEY APCD
PM10T: .000634
TOGT: .00110984632896983494593056346044393853158 8
PMT: .00063782696177062374245472837022132796780 7
CHAPIS:
CERR Code:
ROGT: .000975
COT: .00435
NOXT: .0132
SOXT: .0000249

2019 Toxic Data

CO: 16
Air Basin: SJV
Faccility ID: 7585
District: SJU
Facility SIC Code: 5722
COID: KIN
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:
DISN: SAN JOAQUIN VALLEY APCD
CHAPIS:
CERR Code:
TS:
Health Risk Asmt:

2020 Criteria Data

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
Facility ID:	7585	**ROGT:**	.00127
District:	SJU	**COT:**	.00564
Facility SIC Code:	5722	**NOXT:**	.017131365
CO ID:	KIN	**SOXT:**	.0000323
DISN:	SAN JOAQUIN VALLEY APCD		
TOGT:	.001445645987478656801365964712578258394991		
PMT:	.000828973843058350100603621730382293762575		
PM10T:	.000824		

2020 Toxic Data

CO:	16	**DISN:**	SAN JOAQUIN VALLEY APCD
Air Basin:	SJV	**CHAPIS:**	
Facility ID:	7585	**CHERR Code:**	
District:	SJU	**TS:**	
Facility SIC Code:	5722	**Health Risk Asmt:**	
COID:	KIN		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2021 Toxic Data

Co:	16	**DISN:**	SAN JOAQUIN VALLEY APCD
Air Basin:	SJV	**CHAPIS:**	
Facility ID:	7585	**Cerr Code:**	
District:	SJU	**TS:**	
Facility SIC Code:	5722	**Health Risk Asmt:**	
COID:	KIN		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2021 Criteria Data

Co:	16	**CHAPIS:**	
Air Basin:	SJV	**Cerr Code:**	
Facility ID:	7585	**ROGT:**	.00266
District:	SJU	**COT:**	.0118
Facility SIC Code:	5722	**NOXT:**	.0359
CO ID:	KIN	**SOXT:**	.0000678
DISN:	SAN JOAQUIN VALLEY APCD		
TOGT:	.001445645987478656801365964712578258394991		
PMT:	.000828973843058350100603621730382293762575		
PM10T:	.00173		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
m-3-820291438-b 3	1 of3	WSW	0.19 / 1,014.45	244.17 / 0	TRI-COUNTIES WALNUTS, INC. 10493 13TH AVE HANFORD CA 93230	dd-CUPA KINGS-820291438-bb CUPA KINGS

Facility ID: FA0002785

Detail(s)

Mailing Name:	ED ESAJIAN/ RAFFI KARAYM
Mailing Address1:	P O BOX 378
Mailing State:	CA
Mailing Zip:	93232

Detail(s)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CERS ID:
Prgm Elm Code: 2113
Status: Inactive

CERS ID:
Prgm Elm Code: 2226
Status: Active

---

m-3-861270666-b

3 — **2 of3** — **WSW** — **0.19 / 1,014.45** — **244.17 / 0**

TRI-COUNTIES WALNUT CO
10493 13TH AVE
HANFORD CA 93230

dd-EMISSIONS-861270666-bb
dds-861270666-dv

EMISSIONS

2000 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	.01
CO:	16	**ROGT:**	0
Air Basin:	SJV	**COT:**	.14
District:	SJU	**NOXT:**	.56
COID:	KIN	**SOXT:**	.0024
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.01
CHAPIS:		**PM10T:**	.01

2000 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2001 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	7.81
CO:	16	**ROGT:**	5.45
Air Basin:	SJV	**COT:**	.12
District:	SJU	**NOXT:**	.49
COID:	KIN	**SOXT:**	0
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	15.01
CHAPIS:	Y	**PM10T:**	10.51

2001 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	Y
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2002 Criteria Data

Facility ID:	3375	**CERR Code:**	

Facility SIC Code:	723	**TOGT:**	11.188872975022251310498102518903951233 32
CO:	16	**ROGT:**	7.81
Air Basin:	SJV	**COT:**	.6
District:	SJU	**NOXT:**	.18
COID:	KIN	**SOXT:**	.03
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	15.03
CHAPIS:	Y	**PM10T:**	4.38

2002 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	Y
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2003 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	11.22
CO:	16	**ROGT:**	7.81925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	15.04
CHAPIS:	Y	**PM10T:**	10.542

2003 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	Y
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2004 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	12.141214316024618771277413051724346032 53
CO:	16	**ROGT:**	8.46925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	16.292
CHAPIS:	Y	**PM10T:**	4.7545

2004 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	Y
Air Basin:	SJV	**CERR Code:**	
District:	SJU		

TS:
Health Risk Asmt:
Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2005 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	12.141214316024618771277413051724346032 53
CO:	16	***ROGT:***	8.46925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21
COID:	KIN	***SOXT:***	.0455
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	16.292
CHAPIS:		***PM10T:***	4.7545

2005 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2006 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0455945049739459971577451444812884888678
CO:	16	***ROGT:***	.01925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21
COID:	KIN	***SOXT:***	.0455
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.042
CHAPIS:		***PM10T:***	.042

2006 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2007 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0455945049739459971577451444812884888678
CO:	16	***ROGT:***	.01925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21

COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.042
CHAPIS:		**PM10T:**	.042

2007 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2008 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	. 0455945049739459971577451444812884888678
CO:	16	**ROGT:**	.01925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.042
CHAPIS:		**PM10T:**	.042

2008 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2009 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	. 0455945049739459971577451444812884888678
CO:	16	**ROGT:**	.01925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.042
CHAPIS:		**PM10T:**	.042

2009 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			

Non-Cancer Chronic Haz Ind:
Non-Cancer Acute Haz Ind:

2010 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2011 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0455945049739459971577451444812884888678
CO:	16	***ROGT:***	.01925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21
COID:	KIN	***SOXT:***	.0455
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.042
CHAPIS:		***PM10T:***	.042

2011 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2012 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0455945049739459971577451444812884888678
CO:	16	***ROGT:***	.01925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21
COID:	KIN	***SOXT:***	.0455
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.042
CHAPIS:		***PM10T:***	.042

2012 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			

Non-Cancer Acute Haz Ind:

2013 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.04375
CO:	16	***ROGT:***	.01925
Air Basin:	SJV	***COT:***	.7
District:	SJU	***NOXT:***	.21
COID:	KIN	***SOXT:***	.0455
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.042
CHAPIS:		***PM10T:***	.042

2013 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2014 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0375
CO:	16	***ROGT:***	.0165
Air Basin:	SJV	***COT:***	.6
District:	SJU	***NOXT:***	.18
COID:	KIN	***SOXT:***	.039
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.036
CHAPIS:		***PM10T:***	.036

2014 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2015 Criteria Data

Facility ID:	3375	***CERR Code:***	
Facility SIC Code:	723	***TOGT:***	.0375
CO:	16	***ROGT:***	.0165
Air Basin:	SJV	***COT:***	.6
District:	SJU	***NOXT:***	.18
COID:	KIN	***SOXT:***	.039
DISN:	SAN JOAQUIN VALLEY APCD	***PMT:***	.036
CHAPIS:		***PM10T:***	.036

2015 Toxic Data

Facility ID:	3375	***COID:***	KIN

Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2016 Criteria Data

Facility ID:	3375	**CERR CODE:**	
Facility SIC Code:	723	**TOGT:**	.04375
CO:	16	**ROGT:**	.01925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.042
CHAPIS:		**PM10T:**	.042

2016 Toxic Data

Facility ID:	3375	**TS:**	
Facility SIC Code:	723	**HRA:**	
CERR CODE:		**CH Index:**	
COID:	KIN	**AH Index:**	
CO:	16	**Air Basin:**	SJV
DISN:	SAN JOAQUIN VALLEY APCD	**District:**	SJU
CHAPIS:			

2017 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	.04375
CO:	16	**ROGT:**	.01925
Air Basin:	SJV	**COT:**	.7
District:	SJU	**NOXT:**	.21
COID:	KIN	**SOXT:**	.0455
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.042
CHAPIS:		**PM10T:**	.042

2017 Toxic Data

Facility ID:	3375	**COID:**	KIN
Facility SIC Code:	723	**DISN:**	SAN JOAQUIN VALLEY APCD
CO:	16	**CHAPIS:**	
Air Basin:	SJV	**CERR Code:**	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2018 Criteria Data

Facility ID:	3375	**CERR Code:**	
Facility SIC Code:	723	**TOGT:**	.040625
CO:	16	**ROGT:**	.017875
Air Basin:	SJV	**COT:**	.65
District:	SJU	**NOXT:**	.195
COID:	KIN	**SOXT:**	.04225
DISN:	SAN JOAQUIN VALLEY APCD	**PMT:**	.039
CHAPIS:		**PM10T:**	.039

2018 Toxic Data

Facility ID:	3375	***COID:***	KIN
Facility SIC Code:	723	***DISN:***	SAN JOAQUIN VALLEY APCD
CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
District:	SJU		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2019 Criteria Data

CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
Facility ID:	3375	***ROGT:***	.017875
District:	SJU	***COT:***	.65
Facility SIC Code:	723	***NOXT:***	.195
CO ID:	KIN	***SOXT:***	.04225
DISN:	SAN JOAQUIN VALLEY APCD		
PM10T:	.039		
TOGT:	.040625		
PMT:	.039		

2019 Toxic Data

CO:	16	***DISN:***	SAN JOAQUIN VALLEY APCD
Air Basin:	SJV	***CHAPIS:***	
Faccility ID:	3375	***CERR Code:***	
District:	SJU	***TS:***	
Facility SIC Code:	723	***Health Risk Asmt:***	
COID:	KIN		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2020 Criteria Data

CO:	16	***CHAPIS:***	
Air Basin:	SJV	***CERR Code:***	
Facility ID:	3375	***ROGT:***	.161699998
District:	SJU	***COT:***	5.879999924
Facility SIC Code:	723	***NOXT:***	1.763999977
CO ID:	KIN	***SOXT:***	.382199995
DISN:	SAN JOAQUIN VALLEY APCD		
TOGT:	.367499995454545454545454545454545454545455		
PMT:	.352799995		
PM10T:	.352799995		

2020 Toxic Data

CO:	16	***DISN:***	SAN JOAQUIN VALLEY APCD
Air Basin:	SJV	***CHAPIS:***	
Facility ID:	3375	***CHERR Code:***	
District:	SJU	***TS:***	
Facility SIC Code:	723	***Health Risk Asmt:***	
COID:	KIN		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2021 Toxic Data

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Co:	16	**DISN:**	SAN JOAQUIN VALLEY APCD
Air Basin:	SJV	**CHAPIS:**	
Facility ID:	3375	**Cerr Code:**	
District:	SJU	**TS:**	
Facility SIC Code:	723	**Health Risk Asmt:**	
COID:	KIN		
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2021 Criteria Data

Co:	16	**CHAPIS:**	
Air Basin:	SJV	**Cerr Code:**	
Facility ID:	3375	**ROGT:**	.19477149
District:	SJU	**COT:**	7.08259964
Facility SIC Code:	723	**NOXT:**	2.124779892
CO ID:	KIN	**SOXT:**	.460368977
DISN:	SAN JOAQUIN VALLEY APCD		
TOGT:	.367499995454545454545454545454545455		
PMT:	.352799995		
PM10T:	.424955978		

m-3-879464275-b **3** | ***3 of3*** | ***WSW*** | ***0.19 / 1,014.45*** | ***244.17 / 0*** | ***TRI COUNTY WALNUT INC***
10493 13TH AVE
HANFORD CA 93230-9208 | dd-RCRA NON GEN-879464275-bb rds-879464275-y1y
RCRA NON GEN

EPA Handler ID:	CAL000450182
Gen Status Universe:	No Report
Contact Name:	RAFFI KARAYAN
Contact Address:	PO BOX 378 , , HANFORD , CA, 93232-0378 ,
Contact Phone No and Ext:	559-816-7280
Contact Email:	RAFFI@ATT.NET
Contact Country:	
County Name:	KINGS
EPA Region:	09
Land Type:	
Receive Date:	20191023
Location Latitude:	
Location Longitude:	
Recycler Activity?:	NO
Recycler Activity Note:	This facility has no indication of Recycling Activity.

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Recycler Activity: No
Recycler Activity Without Storage: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20191023
Handler Name: TRI COUNTY WALNUT INC
Source Type: Implementer
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: RAFFI KARAYAN
Date Became Current:
Date Ended Current:
Phone: 559-816-7280
Source Type: Implementer
Street No:
Street 1: PO BOX 378
Street 2:
City: HANFORD
State: CA
Country:
Zip Code: 93232-0378

Owner/Operator Ind: Current Owner
Type: Other
Name: TRI COUNTY WALNUT INC
Date Became Current:
Date Ended Current:
Phone: 559-816-7280
Source Type: Implementer
Street No:
Street 1: 10493 13TH AVE
Street 2:
City: HANFORD
State: CA
Country:
Zip Code: 93230-9208

m-4-879461914-b

4

1 of1 | **NE** | **0.20 / 1,079.59** | **244.78 / 1** | **CWP CALIFORNIA CORP DBA MISTER CAR WASH**
1981 W LACEY BLVD
HANFORD CA 93230

dd-RCRA NON GEN-879461914-bb
r1e-879461914-y1y

RCRA
NON GEN

EPA Handler ID: CAL000449833
Gen Status Universe: No Report
Contact Name: AARON BROWN
Contact Address: 715 14TH STREET , , MODESTO , CA, 95354 ,
Contact Phone No and Ext: 209-324-8738
Contact Email: ABROWN@MISTERCARWASH.COM
Contact Country:
County Name: KINGS
EPA Region: 09
Land Type:
Receive Date: 20191009
Location Latitude:
Location Longitude:
Recycler Activity?: NO
Recycler Activity Note: This facility has no indication of Recycling Activity.

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No

Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No
Recycler Activity:	No
Recycler Activity Without Storage:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20191009
Handler Name:	CWP CALIFORNIA CORP DBA MISTER CAR WASH
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	715 14TH STREET
Name:	AARON BROWN	**Street 2:**	
Date Became Current:		**City:**	MODESTO
Date Ended Current:		**State:**	CA
Phone:	209-324-8738	**Country:**	
Source Type:	Implementer	**Zip Code:**	95354
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	222 E FIFTH ST
Name:	CWP CALIFORNIA CORP	**Street 2:**	
Date Became Current:		**City:**	TUCSON
Date Ended Current:		**State:**	AZ
Phone:	520-615-4000	**Country:**	
Source Type:	Implementer	**Zip Code:**	85705

m-5-861338804-b

5

1 of2 | ***NE*** | ***0.23 / 1,214.00*** | ***244.70 / 1*** | ***Lowe's #2215***
1955 W LACEY BLVD
HANFORD CA 93230

dd-CERS TANK-861338804-bb

CERS TANK

Site ID:	45246
Latitude:	36.326111
Longitude:	-119.677933

Regulated Programs

EI ID:	10411216
EI Description:	Chemical Storage Facilities
EI ID:	10411216
EI Description:	Hazardous Waste Generator
EI ID:	10411216
EI Description:	Aboveground Petroleum Storage

Violations

Violation Date: 05/13/2019 **Violation Source:** CERS
Violation Program: APSA **Violation Division:** Kings County Environmental Health
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Notes:

Returned to compliance on 07/01/2019. No SPCC plan on site. Please keep a copy at all times.

Violation Description:

Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.

Violations

Violation Date: 02/10/2016 **Violation Source:** CERS
Violation Program: HMRRP **Violation Division:** Kings County Environmental Health
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Notes:

Returned to compliance on 03/11/2016. During today's inspection the following items either need to be changed or added onto CERS: 1. The chemical location for waste aerosols, waste toxics, waste flammable solids, waste oil/fuel, waste corrosive liquids (acidic), waste oxidizing liquids, and waste corrosive liquids (basic) needs to be changed to hazmat cage. 2. Waste aerosols, waste toxics, and waste flammable solids storage container needs to be changed to plastic/nonmtellic drum. 3. Waste oil/fuel needs to have its largest container changed to 5 gallons, maximum daily changed to 10 gallons, and the average daily changed to 5 gallons. 4. Waste corrosive liquids (acidic) and waste corrosive (basic) largest container needs to be changed to 30 gallons, average daily amount needs to be changed to 30 gallons, and the maximum daily amount needs to be changed to 60 gallons. 5. Empty containers, last containing paint tint location needs to be changed to "back of store in Hazardous Waste Accumulation Area [Truncated]

Violation Description:

Failure to complete and electronically submit hazardous material inventory information for all reportable hazardous materials on site at or above reportable quantities.

Enforcements

Enf Action Date: 02/10/2016 **Enf Action Program:** HMRRP
Enf Action Type: Notice of Violation (Unified Program) **Enf Action Source:** CERS
Enf Action Division: Kings County Environmental Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Enf Action Date: 05/13/2019 **Enf Action Program:** APSA
Enf Action Type: Notice of Violation (Unified Program) **Enf Action Source:** CERS
Enf Action Division: Kings County Environmental Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Evaluations

Eval Date: 02/10/2016
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

The facility's hazardous materials were observed properly stored and labeled. Employee training on the facility's hazardous waste was observed up-to-date. Only a few items need to be updated, please see the comments above.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 02/10/2016

Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

The facility currently has 21st Century Environmental Management of California as their registered hauler for the hazardous waste. Hazardous waste manifests were reveiwed for the past three years and currently the facility has their registered hauler pick up their waste every 3 months. All of the facility's hazardous waste was observed properly stored and labeled.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 05/13/2019
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

The site map and the chemical inventory submitted on CERS is accurate. All training documents are kept up and all employees who handle hazardous materials and waste receive regular training.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 05/13/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Monthly inspections logs and tests of the generator that holds the diesel were reviewed.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 05/13/2019
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

All hazardous waste drums were well kept and labeled. The accumulation start dates were filled in. The manifests are kept in the corporate office.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 02/10/2016
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Kings County Environmental Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

The facility currently has a SPCC plan onsite that was developed by a professional engineer in 2009. This plan was last updated in 2015. The facility's 1500 gallon diesel tank for the facility's generator was observed in satisfactory condition.; Note: data in [EVAL Notes] field for some records is truncated from the source.

Affiliations

Affil Type Desc: Document Preparer

Entity Name: APTIM
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Legal Owner
Entity Name: LOWE'S Home Centers, LLC
Entity Title:
Address: 1000 Lowe's Blvd., LPH28
City: Mooresville
State: NC
Country: United States
Zip Code: 28117
Phone: (704) 758-6033

Affil Type Desc: Operator
Entity Name: LOWE'S Home Centers, LLC
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (559) 410-9000

Affil Type Desc: Identification Signer
Entity Name: Bryan Gadberry
Entity Title: Environmental Operations Compliance
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: 1000 Lowe's Blvd., LPH28
City: Mooresville
State: NC
Country:
Zip Code: 28117
Phone:

Affil Type Desc: Parent Corporation
Entity Name: LOWE'S Home Centers, LLC
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Property Owner
Entity Name: Lowe's Home Centers, LLC
Entity Title:
Address: 1000 Lowe's Blvd., LPH28
City: Mooresville
State: NC
Country: United States
Zip Code: 28117
Phone: (704) 758-6033

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Affil Type Desc: CUPA District
Entity Name: Kings County Env Health
Entity Title:
Address: 330 Campus Drive
City: Hanford
State: CA
Country:
Zip Code: 93230
Phone: (559) 584-1411

Affil Type Desc: Environmental Contact
Entity Name: Bryan Gadberry
Entity Title:
Address: 1000 Lowe's Blvd., LPH28
City: Mooresville
State: NC
Country:
Zip Code: 28117
Phone:

Coordinates

Env Int Type Code: HWG
Program ID: 10411216
Latitude: 36.326110
Longitude: -119.677930
Coord Name:
Ref Point Type Desc: Center of a facility or station.

m-5-867211515-b

5 — ***2 of2*** — ***NE*** — ***0.23 / 1,214.00*** — ***244.70 / 1*** — ***LOWE'S OF HANFORD #2215***
1955 WEST LACEY BLVD
HANFORD CA 93230

dd-RCRA SQG-867211515-bb
d1a-867211515-yly

RCRA SQG

EPA Handler ID: CAR000280131
Gen Status Universe: Small Quantity Generator
Contact Name: BRIAN MULLEN
Contact Address: 1000 , LOWES BLVD., LPH28 , , MOORESVILLE , NC, 28117 , US
Contact Phone No and Ext: 704-993-1564
Contact Email: HAZMAT@LOWES.COM
Contact Country: US
County Name: KINGS
EPA Region: 09
Land Type: Private
Receive Date: 20240827
Location Latitude: 36.32807
Location Longitude: -119.687243
Recycler Activity(YES/NO)?: NO
Recycler Activity Note: This facility has no indication of Recycling Activity.

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No

Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Recycler Activity: No
Recycler Activity W.O. Stor: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20171226
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D006
Waste Code Description: CADMIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: U154
Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20201105
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2

Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D027
Waste Code Description: 1,4-DICHLOROBENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: U002
Waste Code Description: 2-PROPANONE (I) (OR) ACETONE (I)

Hazardous Waste Code: U072
Waste Code Description: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

Hazardous Waste Code: U134
Waste Code Description: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Hazardous Waste Code: U154
Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Code: U159
Waste Code Description: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Hazardous Waste Code: U165
Waste Code Description: NAPHTHALENE

Hazardous Waste Code: U210
Waste Code Description: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

Hazardous Waste Code: U240
Waste Code Description: 2,4-D, SALTS & ESTERS (OR) ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS (OR) DICHLOROPHENOXYACETIC ACID 2,4-D

Hazardous Waste Code: U249
Waste Code Description: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Hazardous Waste Code: U279
Waste Code Description: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Hazardous Waste Code: U411
Waste Code Description: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Hazardous Waste Handler Details

Sequence No: 3
Receive Date: 20220630
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D027

Waste Code Description: 1,4-DICHLOROBENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: U002
Waste Code Description: 2-PROPANONE (I) (OR) ACETONE (I)

Hazardous Waste Code: U072
Waste Code Description: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

Hazardous Waste Code: U134
Waste Code Description: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Hazardous Waste Code: U154
Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Code: U159
Waste Code Description: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Hazardous Waste Code: U165
Waste Code Description: NAPHTHALENE

Hazardous Waste Code: U210
Waste Code Description: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

Hazardous Waste Code: U240
Waste Code Description: 2,4-D, SALTS & ESTERS (OR) ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS (OR) DICHLOROPHENOXYACETIC ACID 2,4-D

Hazardous Waste Code: U249
Waste Code Description: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Hazardous Waste Code: U279
Waste Code Description: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Hazardous Waste Code: U411
Waste Code Description: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Hazardous Waste Handler Details

Sequence No: 4
Receive Date: 20230506
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D010
Waste Code Description: SELENIUM

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D027
Waste Code Description: 1,4-DICHLOROBENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: U002
Waste Code Description: 2-PROPANONE (I) (OR) ACETONE (I)

Hazardous Waste Code: U072
Waste Code Description: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

Hazardous Waste Code: U134
Waste Code Description: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Hazardous Waste Code: U154
Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Code: U159
Waste Code Description: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Hazardous Waste Code: U165
Waste Code Description: NAPHTHALENE

Hazardous Waste Code: U210
Waste Code Description: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

Hazardous Waste Code: U240
Waste Code Description: 2,4-D, SALTS & ESTERS (OR) ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS (OR) DICHLOROPHENOXYACETIC ACID 2,4-D

Hazardous Waste Code: U249
Waste Code Description: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Hazardous Waste Code: U279
Waste Code Description: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Hazardous Waste Code: U411

Waste Code Description: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Hazardous Waste Handler Details

Sequence No: 5
Receive Date: 20231007
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 122
Waste Code Description: Alkaline solution without metals (pH > 12.5)

Hazardous Waste Code: 123
Waste Code Description: Unspecified alkaline solution

Hazardous Waste Code: 131
Waste Code Description: Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

Hazardous Waste Code: 141
Waste Code Description: Off-specification, aged, or surplus inorganics

Hazardous Waste Code: 181
Waste Code Description: Other inorganic solid waste

Hazardous Waste Code: 211
Waste Code Description: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)

Hazardous Waste Code: 213
Waste Code Description: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

Hazardous Waste Code: 214
Waste Code Description: Unspecified solvent mixture

Hazardous Waste Code: 221
Waste Code Description: Waste oil and mixed oil

Hazardous Waste Code: 223
Waste Code Description: Unspecified oil-containing waste

Hazardous Waste Code: 271
Waste Code Description: Organic monomer waste (includes unreacted resins)

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 343
Waste Code Description: Unspecified organic liquid mixture

Hazardous Waste Code: 351
Waste Code Description: Organic solids with halogens

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: 791
Waste Code Description: Liquids with pH < 2

Hazardous Waste Code: 792
Waste Code Description: Liquids with pH < 2 with metals

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D010
Waste Code Description: SELENIUM

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D027
Waste Code Description: 1,4-DICHLOROBENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: U002
Waste Code Description: 2-PROPANONE (I) (OR) ACETONE (I)

Hazardous Waste Code: U072
Waste Code Description: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

Hazardous Waste Code: U134
Waste Code Description: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

Hazardous Waste Code: U154
Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Code: U159
Waste Code Description: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Hazardous Waste Code: U165
Waste Code Description: NAPHTHALENE

Hazardous Waste Code: U210
Waste Code Description: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

Hazardous Waste Code: U240
Waste Code Description: 2,4-D, SALTS & ESTERS (OR) ACETIC ACID, (2,4-DICHLOROPHENOXY)-, SALTS & ESTERS (OR) DICHLOROPHENOXYACETIC ACID 2,4-D

Hazardous Waste Code: U249

Waste Code Description: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Hazardous Waste Code: U279
Waste Code Description: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Hazardous Waste Code: U411
Waste Code Description: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Hazardous Waste Handler Details

Sequence No: 6
Receive Date: 20240827
Handler Name: LOWE'S OF HANFORD #2215
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: 122
Waste Code Description: Alkaline solution without metals (pH > 12.5)

Hazardous Waste Code: 123
Waste Code Description: Unspecified alkaline solution

Hazardous Waste Code: 131
Waste Code Description: Aqueous solution (2 < pH < 12.5) containing reactive anions (azide, bromate, chlorate, cyanide, fluoride, hypochlorite, nitrite, perchlorate, and sulfide anions)

Hazardous Waste Code: 141
Waste Code Description: Off-specification, aged, or surplus inorganics

Hazardous Waste Code: 181
Waste Code Description: Other inorganic solid waste

Hazardous Waste Code: 211
Waste Code Description: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)

Hazardous Waste Code: 213
Waste Code Description: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

Hazardous Waste Code: 214
Waste Code Description: Unspecified solvent mixture

Hazardous Waste Code: 221
Waste Code Description: Waste oil and mixed oil

Hazardous Waste Code: 223
Waste Code Description: Unspecified oil-containing waste

Hazardous Waste Code: 271
Waste Code Description: Organic monomer waste (includes unreacted resins)

Hazardous Waste Code: 331
Waste Code Description: Off-specification, aged, or surplus organics

Hazardous Waste Code: 343
Waste Code Description: Unspecified organic liquid mixture

Hazardous Waste Code: 351
Waste Code Description: Organic solids with halogens

Hazardous Waste Code: 352
Waste Code Description: Other organic solids

Hazardous Waste Code: 791
Waste Code Description: Liquids with pH < 2

Hazardous Waste Code: 792
Waste Code Description: Liquids with pH < 2 with metals

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D003
Waste Code Description: REACTIVE WASTE

Hazardous Waste Code: D004
Waste Code Description: ARSENIC

Hazardous Waste Code: D005
Waste Code Description: BARIUM

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Code: D009
Waste Code Description: MERCURY

Hazardous Waste Code: D010
Waste Code Description: SELENIUM

Hazardous Waste Code: D011
Waste Code Description: SILVER

Hazardous Waste Code: D016
Waste Code Description: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Hazardous Waste Code: D027
Waste Code Description: 1,4-DICHLOROBENZENE

Hazardous Waste Code: D035
Waste Code Description: METHYL ETHYL KETONE

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: U002
Waste Code Description: 2-PROPANONE (I) (OR) ACETONE (I)

Hazardous Waste Code: U072
Waste Code Description: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

Hazardous Waste Code: U134
Waste Code Description: HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)

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Waste Code Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Hazardous Waste Code: U159
Waste Code Description: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Hazardous Waste Code: U165
Waste Code Description: NAPHTHALENE

Hazardous Waste Code: U210
Waste Code Description: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

Hazardous Waste Code: U240
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Waste Code Description: ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS

Hazardous Waste Code: U279
Waste Code Description: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

Hazardous Waste Code: U411
Waste Code Description: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-758-2955
Source Type: Notification
Street No: 1605
Street 1: CURTIS BRIDGE RD
Street 2:
City: WILKESBORO
State: NC
Country: US
Zip Code: 28697

Owner/Operator Ind: Current Owner
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-993-1564
Source Type: Notification
Street No: 1000
Street 1: LOWES BLVD.
Street 2:
City: MOORESVILLE
State: NC
Country: US
Zip Code: 28117

Owner/Operator Ind: Current Owner
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-758-6033
Source Type: Notification
Street No: 1000
Street 1: LOWES BLVD.
Street 2:
City: MOORESVILLE
State: NC
Country: US
Zip Code: 28117

Owner/Operator Ind: Current Owner
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-758-2955
Source Type: Notification
Street No: 1605
Street 1: CURTIS BRIDGE RD
Street 2:
City: WILKESBORO
State: NC
Country: US
Zip Code: 28697

Owner/Operator Ind: Current Owner
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-758-2955
Source Type: Notification
Street No: 1000
Street 1: LOWES BLVD.
Street 2:
City: MOORESVILLE
State: NC
Country: US
Zip Code: 28117

Owner/Operator Ind: Current Operator
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Date Ended Current:
Phone: 704-993-1564
Source Type: Notification
Street No: 1000
Street 1: LOWES BLVD.
Street 2:
City: MOORESVILLE
State: NC
Country: US
Zip Code: 28117

Owner/Operator Ind: Current Operator
Type: Private
Name: LOWE'S HOME CENTERS, LLC
Date Became Current: 20081102
Street No: 1000
Street 1: LOWES BLVD.
Street 2:
City: MOORESVILLE

Date Ended Current:		**State:**	NC
Phone:	704-758-2955	**Country:**	US
Source Type:	Notification	**Zip Code:**	28117
Owner/Operator Ind:	Current Owner	**Street No:**	1000
Type:	Private	**Street 1:**	LOWES BLVD., LPH28
Name:	LOWE'S HOME CENTERS, LLC	**Street 2:**	
Date Became Current:	20081102	**City:**	MOORESVILLE
Date Ended Current:		**State:**	NC
Phone:	704-993-1564	**Country:**	US
Source Type:	Notification	**Zip Code:**	28117
Owner/Operator Ind:	Current Operator	**Street No:**	1000
Type:	Private	**Street 1:**	LOWES BLVD.
Name:	LOWE'S HOME CENTERS, LLC	**Street 2:**	
Date Became Current:	20081102	**City:**	MOORESVILLE
Date Ended Current:		**State:**	NC
Phone:	704-758-6033	**Country:**	US
Source Type:	Notification	**Zip Code:**	28117
Owner/Operator Ind:	Current Operator	**Street No:**	1000
Type:	Private	**Street 1:**	LOWES BLVD., LPH28
Name:	LOWE'S HOME CENTERS, LLC	**Street 2:**	
Date Became Current:	20081102	**City:**	MOORESVILLE
Date Ended Current:		**State:**	NC
Phone:	704-993-1564	**Country:**	US
Source Type:	Notification	**Zip Code:**	28117

Historical Handler Details

Receive Dt:	20231007
Generator Code Description:	Small Quantity Generator
Handler Name:	LOWE'S OF HANFORD #2215
Receive Dt:	20230506
Generator Code Description:	Small Quantity Generator
Handler Name:	LOWE'S OF HANFORD #2215
Receive Dt:	20220630
Generator Code Description:	Small Quantity Generator
Handler Name:	LOWE'S OF HANFORD #2215
Receive Dt:	20201105
Generator Code Description:	Small Quantity Generator
Handler Name:	LOWE'S OF HANFORD #2215
Receive Dt:	20171226
Generator Code Description:	Small Quantity Generator
Handler Name:	LOWE'S OF HANFORD #2215

m-6-877576875-b

6 — **1 of1** | **NNW** | **0.26 / 1,365.54** | **243.55 / 0** | **AMERICAN SMOG SHOP**
12758 LACEY BLVD
HANFORD CA 93230-9233

dd-RCRA TSD-877576875-bb
dtl-877576875-yUv
RCRA TSD

EPA Handler ID:	CAL000364458
Gen Status Universe:	No Report
Contact Name:	MICHAEL VANNOTE
Contact Address:	12758 LACEY BLVD , , HANFORD , CA, 93230 ,
Contact Phone No and Ext:	559-589-0737
Contact Email:	AMERICANSMOGSHOP@YAHOO.COM
Contact Country:	
Land Type:	
County Name:	KINGS
EPA Region:	09
Receive Date:	20110609
Location Latitude:	36.328094
Location Longitude:	-119.686712

Recycler Activity?: YES
Recycler Activity Note: This facility has been identified as a Recycler Facility from the RCRA Handler Report Module with a 'Yes' for Recycler Activity with/or without Storage.

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No
Recycler Activity: Yes
Recycler Activity W.O. Storage: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20110609
Handler Name: AMERICAN SMOG SHOP
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified
Source Type: Implementer
TSD Activity: Y

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: MICHAEL VANNOTE
Date Became Current:
Date Ended Current:
Phone: 559-589-0737
Source Type: Implementer
Street No:
Street 1: 12758 LACEY BLVD
Street 2:
City: HANFORD
State: CA
Country:
Zip Code: 93230

Owner/Operator Ind: Current Owner
Type: Other
Name: MICHAEL VANNOTE
Date Became Current:
Date Ended Current:
Phone: 559-589-0737
Source Type: Implementer
Street No:
Street 1: 12758 LACEY BLVD
Street 2:
City: HANFORD
State: CA
Country:
Zip Code: 93230-9233

m-7-866521697-b

7 **1 of1** **WSW** **0.28 / 1,467.93** **242.85 / -1**

Southern California Edison
Former Grangeville Substation
13th Avenue
Hanford CA 93230

dd-CLEANUP SITES-866521697-bb
a1p-866521697-a1p

CLEANUP SITES

Global ID: T10000011360
Site Fac Type (SRCH): CLEANUP PROGRAM SITE
Site Facility Type: CLEANUP PROGRAM SITE
Case Type (DL): Cleanup Program Site

Status (SRCH):	COMPLETED - CASE CLOSED	**RWQCB Region (DL):**	CENTRAL VALLEY RWQCB (REGION 5F)
Status (DL):	Completed - Case Closed	**Census Tract (SRCH):**	6031000500
Status Date (DL):	3/22/2023	**Latitude (DL):**	36.32062
Cleanup Status:	COMPLETED - CASE CLOSED	**Longitude (DL):**	-119.69127

Site Facility Name (SRCH): SOUTHERN CALIFORNIA EDISON FORMER GRANGEVILLE SUBSTATION
Address (SRCH): 13TH AVENUE
City (SRCH): HANFORD
Zip (SRCH): 93230
County (SRCH): KINGS
Street No (DL):
Street Name (DL): 13th Avenue
City (DL): Hanford
Zip (DL): 93230
County (DL): Kings
State (DL): CA
Site Facility Name : SOUTHERN CALIFORNIA EDISON FORMER GRANGEVILLE SUBSTATION
Address : 13TH AVENUE
City : HANFORD
Zip : 93230
County : KINGS
Report Source: GeoTracker Search Results (SRCH); Cleanup Sites from GeoTracker Cleanup Sites Data Download; GeoTracker Search Results Report

GeoTracker Sites Data Download - Site Details

RB Case No: 2050612
Local Case No:
Begin Date: 1/1/1985
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5S)
Local Agency:
CUF Case:
CalEnvScreen Score:
EPA Region: 9
Qty Rlsd Gallons:
Potential COC: Arsenic
How Discovered: Facility Inspection, Site Assessment/Site Investigation
Stop Method: Change Operating Procedures, Close and Remove Tank, Remove Contents
Stop Description: Substation was demolished over the past few years (~2015-2017)
Case Worker: HY
Military DoD Site: No
Leak Reported Dt: 2018-01-10 00:00:00
No Further Action Dt: 2023-03-22 00:00:00
Potential Media of Concern: Soil
How Discovered Description: Completion of a Limited Environmental Site Investigation.
Calwater Watershed Name: South Valley Floor - Hanford-Lemoore (551.90)
DWR GW Subbasin Name: San Joaquin Valley - Tulare Lake (5-022.12)
Disadvantaged Community: Severely Disadvantaged Community
Coordinate Source: Google Geocode
Discharge Cause: Other, Spill
Discharge Source:
Facility Project Sub Type:
Calenviroscreen 3 Score: 76-80%
Calenviroscreen 4 Score: 85-90%
File Location: Regional Board
Claim No:
Claim Status:
Site History:

Southern California Edison (SCE) conducted an investigation of the Site as part of a land divestiture program. Details of the investigation are documented in the Limited Environmental Site Investigation Report (Rubicon, 2017). SCE drilled 100 borings on the Site and collected soil samples from 0.5, 2.0, and 5.0 feet below ground surface (bgs). SCE analyzed the soil samples for California Code of Regulations Title 22 metals (Title 22 metals), chlorinated herbicides, organochlorine pesticides (OCPs), organophosphorus pesticides (OPPs), polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPHs).Summary tables are attached with the analytical results of chlorinated herbicides (Table 8), OCPs (Table 6), OPPs (Table 7), PCBs (Table 2), Title 22 metals (Tables 4 & 5), and TPHs (Table 3). SCE concluded that arsenic was the only contaminant of concern at the Site. The cleanup level of 12 milligrams per kilogram (mg/kg) was used based on a determination by the Department of Toxic Substances Control (DTSC) of the upper-bound of regional background concentrations at school sites throughout Southern California (DTSC, 2009). Boring locations with arsenic concentrations above 12 mg/kg are shown on Figure 3. Site investigations revealed shallow soil at the western property boundary was impacted with arsenic. In 2019, SCE conducted an off-Site investigation to assess possible arsenic contamination on the adjacent property. This work is documented

in the Off-Site Environmental Investigation Report (Rubicon, 2019). SCE completed a total of 21 off-Site borings on the adjacent property. Samples from 0.5, 2.0 and 5.0 feet bgs were field screened for arsenic with an x-ray fluorescence analyzer, and samples from 0.5 and 2.0 feet bgs were submitted for laboratory analysis of arsenic concentrations. Laboratory analytical results showed five samples collected from 0.5 feet bgs had arsenic concentrations above 12 mg/kg (up to 27.0 mg/kg; Figure 4). The United States Environmental Protection Agency's (USEPA's) statistical software ProUCL 5.1 was used to calculate the 95% upper confidence limit (UCL 95%) values for arsenic at 0.5 feet bgs. Using the best-fit distribution, the UCL 95% was calculated to be 11.59 mg/kg. This is below the cleanup level of 12 mg/kg. Therefore, SCE did not consider that remediation of the western property was required. Central Valley Water Board staff concurred that off-Site excavation was not necessary. In 2021, SCE excavated areas of the Site with arsenic exceeding the cleanup level of 12 mg/kg. The excavation details and confirmation sample results are included in the Remediation Confirmation Report Revision 1 (Rubicon, 2022). Excavation depths ranged from 1.5 to 6.7 feet bgs, and SCE removed a total of approximately 907 tons of soil and gravel and disposed of it at a Class III landfill. SCE collected confirmation samples from the excavation sidewalls and floors (Figure 6). At a minimum, sidewall samples were collected every 30 linear feet, and floor samples were collected every 400 square feet. Laboratory analysis of the confirmation samples indicate all final arsenic concentrations at the Site were either below the cleanup level or the reporting limit (Table 2a). After soil removal was completed, SCE backfilled the excavation with imported soil. Samples of the imported soil were analyzed for PCBs, Title 22 metals, TPHs, and volatile organic compounds (VOCs). Laboratory results showed PCBs, TPHs, and VOCs were not detected above the laboratory reporting limits. Title 22 metals were either not detected above the reporting limits or detected below the screening levels. For all metals except arsenic, the screening levels used were either the Human Health Risk Assessment Note Number 3, DTSC-Modified Screening Levels (revised May 2022) (HHRA Note 3) or the USEPA Regional Screening Levels for Residential Land Use (updated May 2022) if no value was available for the constituent in HHRA Note 3. The cleanup level of 12 mg/kg was used as the screening level for arsenic. SCE requested a No Further Action determination in the 12 September 2022 Remediation Confirmation Report Revision 1. Central Valley Water Board staff concurred with site closue on 22 March 2023.

GeoTracker Sites Data Download - Status History

Status:	Completed - Case Closed
Status Date:	2023-03-22 00:00:00
Status:	Open - Eligible for Closure
Status Date:	2022-09-28 00:00:00
Status:	Open - Remediation
Status Date:	2021-09-07 00:00:00
Status:	Open - Site Assessment
Status Date:	2018-03-05 00:00:00
Status:	Open - Case Begin Date
Status Date:	1985-01-01 00:00:00

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type:	Regional Board Caseworker - Primary Caseworker
Contact Name:	HOLLY YOUNG
Organization Name:	CENTRAL VALLEY RWQCB (REGION 5S)
Address:	11020 Sun Center Drive, Suite 200
City:	RANCHO CORDOVA
Email:	holly.young@waterboards.ca.gov
Phone No:	9164644669

GeoTracker Search - Facilities (as of September 25, 2024)

Project Status:	
Cuf Claim No:	
CUF Priority Assign:	
CUF Amount Paid:	
Composting Method:	
Facility Type:	
WDR Place Type:	
WDR File No:	
WDR Order No:	
File Location:	REGIONAL BOARD
User Defined Beneficial Use:	
Designated Beneficial Use:	MUN, AGR, IND, PROC
Designated Beneficl Use Desc:	Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply, Industrial Process Supply
Project Oversight Agencies:	
Report Link:	https://geotracker.waterboards.ca.gov/profile_report?global_id=T10000011360
Cleanup Status Detail:	COMPLETED - CASE CLOSED AS OF 3/22/2023

Potential COC: ARSENIC
Potential Media of Concern: SOIL
Groundwater Monitoring Freq:
DWR GW Sub Basin: San Joaquin Valley - Tulare Lake (5-022.12)
CalWater Watershed Name: South Valley Floor - Hanford-Lemoore (551.90)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: CENTRAL VALLEY RWQCB (REGION 5S) (LEAD) - CASE #: 2050612
CASE MANAGER: HOLLY YOUNG
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T10000011360&tabname=regulatoryhistory

Site History:

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SCE concluded that arsenic was the only contaminant of concern at the Site. The cleanup level of 12 milligrams per kilogram (mg/kg) was used based on a determination by the Department of Toxic Substances Control (DTSC) of the upper-bound of regional background concentrations at school sites throughout Southern California (DTSC, 2009). Boring locations with arsenic concentrations above 12 mg/kg are shown on Figure 3.

Site investigations revealed shallow soil at the western property boundary was impacted with arsenic. In 2019, SCE conducted an off-Site investigation to assess possible arsenic contamination on the adjacent property. This work is documented in the Off-Site Environmental Investigation Report (Rubicon, 2019). SCE completed a total of 21
off-Site borings on the adjacent property. Samples from 0.5, 2.0 and 5.0 feet bgs were field screened for arsenic with an x-ray fluorescence analyzer, and samples from 0.5 and 2.0 feet bgs were submitted for laboratory analysis of arsenic concentrations. Laboratory analytical results showed five samples collected from 0.5 feet bgs had arsenic concentrations above 12 mg/kg (up to 27.0 mg/kg; Figure 4). The United States Environmental Protection Agency's (USEPA's) statistical software ProUCL 5.1 was used to calculate the 95% upper confidence limit (UCL 95%) values for arsenic at 0.5 feet bgs. Using the best-fit distribution, the UCL 95% was calculated to be 11.59 mg/kg. This is below the cleanup level of 12 mg/kg. Therefore, SCE did not consider that remediation of the western property was required. Central Valley Water Board staff concurred that off-Site excavation was not necessary.

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After soil removal was completed, SCE backfilled the excavation with imported soil. Samples of the imported soil were analyzed for PCBs, Title 22 metals, TPHs, and volatile organic compounds (VOCs). Laboratory results showed PCBs, TPHs, and VOCs were not detected above the laboratory reporting limits. Title 22 metals were either not detected above the reporting limits or detected below the screening levels. For all metals except arsenic, the screening levels used were either the Human Health Risk Assessment Note Number 3, DTSC-Modified Screening Levels (revised May 2022) (HHRA Note 3) or the USEPA Regional Screening Levels for Residential Land Use (updated May 2022) if no value was available for the constituent in HHRA Note 3. The cleanup level of 12 mg/kg was used as the screening level for arsenic.

SCE requested a No Further Action determination in the 12 September 2022 Remediation Confirmation Report Revision 1. Central Valley Water Board staff concurred with site closue on 22 March 2023.

GeoTracker Search - Cleanup Action Report (as of September 25, 2024)

Action Type: EXCAVATION
Begin Date: 9/7/2021
End Date: 9/7/2022
Phase: Soil
Contaminant Mass Removed:
Description: Approximately 900 tons of soil were excavated from the site. The excavation was backfilled with uncontaminated soil.

GeoTracker Search - Regulatory Activities (as of September 25, 2024)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter
Action Date: 3/22/2023

Received Issue Date: 3/22/2023
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6536840&temptable=ENFORCEMENT
Title Description Comments:

No Further Action Determination

Action Type: Notices
Action: Fact Sheets - Public Participation
Action Date: 2/1/2023
Received Issue Date: 2/1/2023
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6525138&temptable=ENFORCEMENT
Title Description Comments:

Proposed No Further Action Determination

Action Type: Other Regulatory Actions
Action: Annual Estimation Letter
Action Date: 7/1/2022
Received Issue Date: 7/1/2022
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6498771&temptable=ENFORCEMENT
Title Description Comments:

Cost Estimate Letter FY22-23

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 6/27/2022
Received Issue Date: 6/27/2022
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6498434&temptable=ENFORCEMENT
Title Description Comments:

Comment Letter for Remediation Confirmation Report

Action Type: Cleanup Action
Action: Excavation
Action Date: 9/7/2021
Received Issue Date:
Doc Link:
Title Description Comments:

Approximately 900 tons of soil were excavated from the site. The excavation was backfilled with uncontaminated soil.

Action Type: Other Regulatory Actions
Action: Annual Estimation Letter
Action Date: 6/16/2021
Received Issue Date: 6/16/2021
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6469240&temptable=ENFORCEMENT
Title Description Comments:

Cost Recovery Estimate Letter

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 9/10/2020
Received Issue Date: 9/10/2020
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6447072&temptable=ENFORCEMENT
Title Description Comments:

RAWP Approval Letter

Action Type: Notices
Action: Notification - Public Notice of ROD/RAP/CAP
Action Date: 6/9/2020
Received Issue Date: 6/9/2020
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6440349&temptable=ENFORCEMENT
Title Description Comments:

Remediation Plan Public Notice

Action Type: Enforcement/Orders
Action: Response to Comments
Action Date: 6/5/2020
Received Issue Date: 6/5/2020
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6440348&temptable=ENFORCEMENT
Title Description Comments:

Remediation Plan comments

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 4/20/2020
Received Issue Date: 4/20/2020
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6432966&temptable=ENFORCEMENT
Title Description Comments:

Water Board Response to Remediation Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 4/20/2020
Received Issue Date: 4/20/2020
Doc Link:
Title Description Comments:

Water Board Response to Remediation Work Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 1/2/2020
Received Issue Date: 1/2/2020
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6424107&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Off-Site Environmental Investigation Report

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 7/23/2019
Received Issue Date: 7/23/2019
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6409494&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Off-Site Environmental Investigation Work Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 2/25/2019
Received Issue Date: 2/25/2019

Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6386240&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Supplemental Environmental Investigation Report

Action Type: Response Requested - Other
Action: Email Correspondence
Action Date: 11/8/2018
Received Issue Date: 11/8/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T10000011360&doc_id=5980374
Title Description Comments:

Transmittal Email for Supplemental Environmental Investigation Report - Grangeville

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 7/9/2018
Received Issue Date: 7/9/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6363434&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Revised Supplemental Environmental Investigation Work Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 6/7/2018
Received Issue Date: 6/7/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6360462&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Supplemental Investigation Work Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 3/5/2018
Received Issue Date: 3/5/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6350429&temptable=ENFORCEMENT
Title Description Comments:

Central Valley Water Board Response to Phase I ESA and LESI

Action Type: Response Requested - Reports
Action: Phase I Assessment Report
Action Date: 1/16/2018
Received Issue Date: 1/16/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T10000011360&doc_id=5958567
Title Description Comments:

High-Level Screen Environmental Site Assessment Report

Action Type: Response Requested - Reports
Action: Site Investigation - Regulator Responded
Action Date: 1/16/2018
Received Issue Date: 1/16/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T10000011360&doc_id=5958569
Title Description Comments:

Limited Environmental Site Investigation Report

Action Type: Leak Action

Action: Leak Reported
Action Date: 1/10/2018
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 8/4/2017
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Stopped
Action Date: 10/1/2016
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Began
Action Date: 1/1/1985
Received Issue Date:
Doc Link:
Title Description Comments:

GeoTracker Search - Documents (as of September 25, 2024)

Document Type: Site Documents ***Document Date:*** 3/22/2023
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: HOLLY YOUNG (REGULATOR)
Title: NO FURTHER ACTION DETERMINATION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6536840

Document Type: Site Documents ***Document Date:*** 2/1/2023
Type: FACT SHEETS - PUBLIC PARTICIPATION ***Submitted:***
Submitted By: HOLLY YOUNG (REGULATOR)
Title: PROPOSED NO FURTHER ACTION DETERMINATION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6525138

Document Type: Site Documents ***Document Date:*** 9/12/2022
Type: REQUEST FOR CLOSURE ***Submitted:***
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: RCR(REV.1) - GRANGEVILLE SUBSTATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3441394388/T10000011360.PDF

Document Type: Site Documents ***Document Date:*** 7/1/2022
Type: ANNUAL ESTIMATION LETTER ***Submitted:***
Submitted By: HOLLY YOUNG (REGULATOR)
Title: COST ESTIMATE LETTER FY22-23
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6498771

Document Type: Site Documents ***Document Date:*** 6/27/2022
Type: STAFF LETTER ***Submitted:***
Submitted By: HOLLY YOUNG (REGULATOR)
Title: COMMENT LETTER FOR REMEDIATION CONFIRMATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6498434

Document Type: Site Documents ***Document Date:*** 2/10/2022
Type: REQUEST FOR CLOSURE ***Submitted:***
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: REMEDIATION CONFIRMATION REPORT - GRANGEVILLE SUBSTATION_02.07.2022
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7094806075/T10000011360.PDF

Document Type: Site Documents **Document Date:** 6/16/2021
Type: ANNUAL ESTIMATION LETTER **Submitted:**
Submitted By: WALTER FLOYD (REGULATOR)
Title: COST RECOVERY ESTIMATE LETTER
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6469240

Document Type: Site Documents **Document Date:** 9/10/2020
Type: STAFF LETTER **Submitted:**
Submitted By: WALTER FLOYD (REGULATOR)
Title: RAWP APPROVAL LETTER
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6447072

Document Type: Site Documents **Document Date:** 6/9/2020
Type: NOTIFICATION - PUBLIC NOTICE OF ROD/RAP/CAP **Submitted:**
Submitted By: WALTER FLOYD (REGULATOR)
Title: REMEDIATION PLAN PUBLIC NOTICE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6440349

Document Type: Site Documents **Document Date:** 6/5/2020
Type: RESPONSE TO COMMENTS **Submitted:**
Submitted By: WALTER FLOYD (REGULATOR)
Title: REMEDIATION PLAN COMMENTS
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6440348

Document Type: Site Documents **Document Date:** 6/4/2020
Type: RESPONSE TO COMMENTS **Submitted:**
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: RESPONSE TO AGENCY COMMENTS REMEDIATION PLAN AND REMEDIATION WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8947216331/T10000011360.PDF

Document Type: Site Documents **Document Date:** 4/20/2020
Type: STAFF LETTER **Submitted:**
Submitted By: WALTER FLOYD (REGULATOR)
Title: WATER BOARD RESPONSE TO REMEDIATION PLAN
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6432966

Document Type: Site Documents **Document Date:** 2/24/2020
Type: CORRECTIVE ACTION PLAN / REMEDIAL ACTION PLAN **Submitted:**
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: REMEDIATION PLAN AND REMEDIATON WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8182848453/T10000011360.PDF

Document Type: Site Documents **Document Date:** 1/2/2020
Type: STAFF LETTER **Submitted:**
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO OFF-SITE ENVIRONMENTAL INVESTIGATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6424107

Document Type: Site Documents **Document Date:** 11/1/2019
Type: SOIL AND WATER INVESTIGATION REPORT **Submitted:**
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: OSEI REPORT - GRANGEVILLE SUBSTATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3309119105/T10000011360.PDF

Document Type: Site Documents **Document Date:** 7/23/2019
Type: STAFF LETTER **Submitted:**
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO OFF-SITE ENVIRONMENTAL INVESTIGATION WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6409494

Document Type: Site Documents **Document Date:** 5/30/2019
Type: OTHER WORKPLAN **Submitted:**
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: OFF-SITE ENVIRONMENTAL INVESTIGATION WORK PLAN - GRANGEVILLE SUBSTATION

Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6334753870/T10000011360.PDF

Document Type: Site Documents ***Document Date:*** 2/25/2019
Type: STAFF LETTER ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6386240

Document Type: Site Documents ***Document Date:*** 11/8/2018
Type: EMAIL CORRESPONDENCE ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: TRANSMITTAL EMAIL FOR SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION REPORT - GRANGEVILLE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&document_id=5980374

Document Type: Site Documents ***Document Date:*** 11/6/2018
Type: SITE ASSESSMENT REPORT ***Submitted:***
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3675869882/T10000011360.PDF

Document Type: Site Documents ***Document Date:*** 7/9/2018
Type: STAFF LETTER ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO REVISED SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6363434

Document Type: Site Documents ***Document Date:*** 6/14/2018
Type: SITE INVESTIGATION WORKPLAN ***Submitted:***
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: WORK PLAN (REV. 1) - SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION_GRANGEVILLE SUBSATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7927002191/T10000011360.PDF

Document Type: Site Documents ***Document Date:*** 6/7/2018
Type: STAFF LETTER ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO SUPPLEMENTAL INVESTIGATION WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6360462

Document Type: Site Documents ***Document Date:*** 5/10/2018
Type: SITE INVESTIGATION WORKPLAN ***Submitted:***
Submitted By: RUBICON ENGINEERING CORPORATION (AUTH_RP)
Title: WORK PLAN - SUPPLEMENTAL ENVIRONMENTAL INVESTIGATION_GRANGEVILLE SUBSATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7128167927/T10000011360.PDF

Document Type: Site Documents ***Document Date:*** 3/5/2018
Type: STAFF LETTER ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: CENTRAL VALLEY WATER BOARD RESPONSE TO PHASE I ESA AND LESI
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&enforcement_id=6350429

Document Type: Site Documents ***Document Date:*** 1/16/2018
Type: SITE INVESTIGATION ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: LIMITED ENVIRONMENTAL SITE INVESTIGATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&document_id=5958569

Document Type: Site Documents ***Document Date:*** 1/16/2018
Type: PHASE I ASSESSMENT REPORT ***Submitted:***
Submitted By: JOHN T. MURPHY (REGULATOR)
Title: HIGH-LEVEL SCREEN ENVIRONMENTAL SITE ASSESSMENT REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T10000011360&document_id=5958567

GeoTracker Search - Cleanup Status History (as of September 25, 2024)

Status: Completed - Case Closed
Date: 3/22/2023

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status: Open - Eligible for Closure
Date: 9/28/2022

Status: Open - Remediation
Date: 9/7/2021

Status: Open - Site Assessment
Date: 3/5/2018

Status: Open - Case Begin Date
Date: 1/1/1985

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m-8-891200386-b

8 | **1 of1** | **SE** | **0.34 / 1,793.45** | **245.81 / 2** | **HANFORD HYUNDAI**
1990 GLENDALE AVE
HANFORD CA 93230

dd-C&D DEBRIS RECY-891200386-bb
p1p-891200386-y1y
C&D
DEBRIS RECY

County: KINGS

Activity Type: USED OIL COLLECTION
Phone No: (559) 582-2277

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m-9-891195183-b

9 | **1 of1** | **NE** | **0.35 / 1,828.03** | **243.98 / 0** | **PEP BOYS #859**
1840 W LACEY BLVD
HANFORD CA 93230

dd-C&D DEBRIS RECY-891195183-bb
p1p-891195183-y1y
C&D
DEBRIS RECY

County: KINGS

Activity Type: USED OIL COLLECTION
Phone No:

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m-10-862148917-b

10 | **1 of1** | **SW** | **0.35 / 1,859.33** | **241.85 / -2** | **SCE Grangeville Substation**
FRONT ST & 13TH AVE
HANFORD CA 93230

dd-DELISTED HAZ-862148917-bb
p1p-862148917-y1y
DELISTED
HAZ

Siteid: 155212
Latitude: 36.315399
Longitude: -119.690979
Original Source: CHAZ
Record Date: 09-JUL-2018

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m-11-891198476-b

11 | **1 of1** | **E** | **0.44 / 2,339.74** | **245.78 / 2** | **O'REILLY AUTO PARTS #3632**
112 N 12TH AVE
HANFORD CA 93230

dd-C&D DEBRIS RECY-891198476-bb
p1p-891198476-y1y
C&D
DEBRIS RECY

County: KINGS

Activity Type: USED OIL COLLECTION
Phone No:

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m-12-820187161-b

12 | **1 of1** | **SSW** | **0.49 / 2,603.14** | **242.78 / -1** | **VERBERG BROS., INC.**
12778 HANFORD - ARMONA RD
HANFORD CA 93230

dd-LUST-820187161-bb
p1p-820187161-y1y
LUST

Global ID: T0603100122
Site Facility Type: LUST CLEANUP SITE
Site Fac Type (SRCH): LUST CLEANUP SITE
Status:
Status (SRCH): COMPLETED - CASE CLOSED
Status (DL): Completed - Case Closed
Status Date (DL): 11/12/2019
Cleanup Status: COMPLETED - CASE CLOSED
Site Facility Name (SRCH): VERBERG BROS., INC.
Address (SRCH): 12778 HANFORD - ARMONA RD

Case Type (DL): LUST Cleanup Site
Oil Field (SRCH):
Oil Field Oper (SRCH):
Census Tract (SRCH): 6031001002
Latitude (DL): 36.3143656759198
Longitude (DL): -119.686658120195
RWQCB Region (DL): CENTRAL VALLEY RWQCB (REGION 5F)

City (SRCH):	HANFORD
Zip (SRCH):	93230
County (SRCH):	KINGS
Street No (DL):	12778
Street Name (DL):	HANFORD - ARMONA RD
City (DL):	HANFORD
Zip (DL):	93230
County (DL):	Kings
State (DL):	CA
Business Name (DL):	VERBERG BROS., INC.
Site Facility Name:	VERBERG BROS., INC.
Address :	12778 HANFORD - ARMONA RD
City :	HANFORD
Zip :	93230
County :	KINGS
Report Source:	LUST Cleanup Sites & Military UST Site from GeoTracker Project Search Results Export; LUST Cleanup Sites & Military UST Site from GeoTracker Cleanup Sites Data Download; LUST Cleanup Sites from GeoTracker Search (as of February 15, 2024)

GeoTracker Sites Data Download - Site Details

CUF Case:	
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5F)
Case Worker:	MLE
Local Agency:	
RB Case No:	5T16000125
Local Case No:	
File Location:	
Potential COC:	Gasoline
Potential Media of Concern:	Aquifer used for drinking water supply
Begin Date:	10/17/1991
How Discovered:	Other Means
How Discovered Description:	
Stop Method:	
Stop Description:	
Calwater Watershed Name:	South Valley Floor - Hanford-Lemoore (551.90)
DWR GW Subbasin Name:	San Joaquin Valley - Tulare Lake (5-022.12)
Disadvantaged Community:	Severely Disadvantaged Community
CalEnvScreen Score:	
Coordinate Source:	Google Map Move
Discharge Cause:	Unknown
Discharge Source:	Tank
EPA Region:	9
Leak Reported Dt:	1991-10-17 00:00:00
Military DoD Site:	No
No Further Action Dt:	2019-11-12 00:00:00
Qty Rlsd Gallons:	
Facility Project Sub Type:	
Calenviroscreen 3 Score:	81-85%
Calenviroscreen 4 Score:	90-95%
Claim No:	2539
Claim Status:	Ineligible
Site History:	

The case was opened following an unauthorized release from an underground storage tank system at the subject site. Corrective action is underway as directed by the CVRWQCB. Corrective action may consist of preliminary site investigation, planning and implementation of remedial action, verification monitoring, or a combination thereof. A summary of the site history is available by clicking on either the "Cleanup Status History", "Regulatory Activities" or the "Site Maps/Documents" tab. For a complete site history the case file at the CVRWQCB should be consulted.

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type:	Regional Board Caseworker - Primary Caseworker
Contact Name:	MICHEALE EASLEY
Organization Name:	CENTRAL VALLEY RWQCB (REGION 5F)
Address:	1685 E Street
City:	FRESNO

Email: micheale.easley@waterboards.ca.gov
Phone No: 5594884391

GeoTracker Sites Data Download - Status History

Status: Completed - Case Closed
Status Date: 11/12/2019

Status: Open - Eligible for Closure
Status Date: 8/23/2017

Status: Open - Site Assessment
Status Date: 6/8/2010

Status: Open - Inactive
Status Date: 6/7/2010

Status: Open - Inactive
Status Date: 6/11/2008

Status: Open - Site Assessment
Status Date: 11/17/2006

Status: Open - Site Assessment
Status Date: 10/17/2001

Status: Open - Case Begin Date
Status Date: 10/17/1991

GeoTracker Search - Regulatory Profile (as of September 25, 2024)

Site Facility Name: VERBERG BROS., INC.
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Address: 12778 HANFORD - ARMONA RD
City: HANFORD
Zip: 93230
County: KINGS
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0603100122
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 11/12/2019
Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0603100122&tabname=regulatoryhistory
Potential COC: GASOLINE
Potential Media of Concern: AQUIFER USED FOR DRINKING WATER SUPPLY
File Location:
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND, PROC
DWR GW Sub Basin: San Joaquin Valley - Tulare Lake (5-022.12)
Calwater Watershed Name: South Valley Floor - Hanford-Lemoore (551.90)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: CENTRAL VALLEY RWQCB (REGION 5F) (LEAD) - CASE #: 5T16000125
CASE MANAGER: MICHEALE EASLEY
KINGS COUNTY
CUF Claim No:
CUF Priority Assig:
CUF Amount Paid:
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply, Industrial Process Supply
Site History:

The case was opened following an unauthorized release from an underground storage tank system at the subject site. Corrective action is underway as directed by the CVRWQCB. Corrective action may consist of preliminary site investigation, planning and implementation of remedial action, verification monitoring, or a combination thereof. A summary of the site history is available by clicking on either the "Cleanup Status History", "Regulatory Activities" or the "Site Maps/Documents" tab. For a complete site history the case file at the CVRWQCB should be consulted.

GeoTracker Search - Cleanup Status History (as of September 25, 2024)

Status: Completed - Case Closed
Date : 11/12/2019

Status: Open - Eligible for Closure
Date : 8/23/2017

Status: Open - Site Assessment
Date : 6/8/2010

Status: Open - Inactive
Date : 6/7/2010

Status: Open - Inactive
Date : 6/11/2008

Status: Open - Site Assessment
Date : 11/17/2006

Status: Open - Site Assessment
Date : 10/17/2001

Status: Open - Case Begin Date
Date : 10/17/1991

GeoTracker Search - Cleanup Action Report (as of September 25, 2024)

Action Type: OTHER (USE DESCRIPTION FIELD)
Begin Date:
End Date:
Phase: Soil, Water
Contaminant Mass Removed:
Description: Natural Attenuation

GeoTracker Search - Regulatory Activities (as of September 25, 2024)

Action Type: Other Regulatory Actions
Action: Closure/No Further Action Letter
Action Date: 11/12/2019
Received Issue Date: 11/12/2019
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6420465&temptable=ENFORCEMENT
Title Description Comments:

Verberg Bros Case Closure Letter

Action Type: Other Regulatory Actions
Action: Closure Summary
Action Date: 11/12/2019
Received Issue Date: 11/12/2019
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6420464&temptable=ENFORCEMENT
Title Description Comments:

Case Closure Summary

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 1/14/2019
Received Issue Date: 1/14/2019
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6382976&temptable=ENFORCEMENT
Title Description Comments:

OVERDUE WELL DESTRUCTION/SITE RESTORATION REPORT

Action Type: Response Requested - Reports
Action: Well Destruction Report
Action Date: 8/6/2018
Received Issue Date: 10/15/2019
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5974937
Title Description Comments:

Properly destroy monitoring wells and dispose of investigation derived waste.

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 6/7/2018
Received Issue Date: 6/7/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6369740&temptable=ENFORCEMENT
Title Description Comments:

Site Inspection

Action Type: Other Regulatory Actions
Action: Site Visit / Inspection / Sampling
Action Date: 6/4/2018
Received Issue Date: 6/4/2018
Doc Link:
Title Description Comments:

Well Destruction Review Additional discussion with local agency on well destruction procedures., Issues with well destruction and proper waste disposal.

Action Type: SWRCB Case Review
Action: Closure Denial Review
Action Date: 6/4/2018
Received Issue Date:
Doc Link:
Title Description Comments:

Not a Request for Closure

Action Type: Response Requested - Reports
Action: Well Destruction Report - Regulator Responded
Action Date: 4/3/2018
Received Issue Date: 4/10/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5955374
Title Description Comments:

SUBMIT A REPORT DOCUMENTING THE WELL DESTRUCTION AND SITE RESTORATION ACTIVITIES - Discussion needed with local agency concerning well destruction procedures.

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 1/30/2018
Received Issue Date: 1/30/2018
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6347291&temptable=ENFORCEMENT
Title Description Comments:

WELL DESTRUCTION

Action Type: Notices
Action: Letter - Notice
Action Date: 10/26/2017
Received Issue Date: 10/26/2017
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6339951&temptable=ENFORCEMENT
Title Description Comments:

Public Notice - Case Closure Consideration

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 10/26/2017
Received Issue Date: 10/26/2017
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6339950&temptable=ENFORCEMENT
Title Description Comments:

Preclosure Public Notification

Action Type: Other Regulatory Actions
Action: File Review - Closure
Action Date: 8/23/2017
Received Issue Date: 8/23/2017
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6334809&temptable=ENFORCEMENT
Title Description Comments:

Review - Site History/Conceptual Site Model/Closure Checklist

Action Type: Response Requested - Other
Action: Request for Closure - Regulator Responded
Action Date: 7/11/2017
Received Issue Date: 7/11/2017
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5941923
Title Description Comments:

Site History / Conceptual Site Model / Closure Checklist

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 2/23/2017
Received Issue Date: 2/23/2017
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6312773&temptable=ENFORCEMENT
Title Description Comments:

Review - Groundwater Monitoring Report

Action Type: Response Requested - Reports
Action: Monitoring Report - Quarterly
Action Date: 2/1/2017
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Response Requested - Reports
Action: Monitoring Report - Quarterly
Action Date: 11/1/2016
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 10/4/2016
Received Issue Date: 10/4/2016
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6301992&temptable=ENFORCEMENT
Title Description Comments:

Review - Quarterly Monitoring Report Q3 2016

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 9/13/2016
Received Issue Date: 9/13/2016
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6298724&temptable=ENFORCEMENT
Title Description Comments:

Review - Groundwater Monitoring Report

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 4/26/2016
Received Issue Date: 4/26/2016
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6283323&temptable=ENFORCEMENT
Title Description Comments:

Groundwater Monitoring Report

Action Type: Response Requested - Reports
Action: Soil and Water Investigation Report
Action Date: 4/1/2016
Received Issue Date:
Doc Link:
Title Description Comments:

Additional Investigation Report

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 2/1/2016
Received Issue Date: 2/1/2016
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6275347&temptable=ENFORCEMENT
Title Description Comments:

Work Plan Review - Additional Investigation Work Plan

Action Type: Response Requested - Reports
Action: Monitoring Report - Semi-Annually
Action Date: 2/1/2016
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Response Requested - Workplans
Action: Well Installation Workplan - Regulator Responded
Action Date: 1/19/2016
Received Issue Date: 1/19/2016
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5877160
Title Description Comments:

Monitoring Well Workplan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 12/15/2015
Received Issue Date: 12/15/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6270436&temptable=ENFORCEMENT
Title Description Comments:

Groundwater Monitoring Report Review

Action Type: Response Requested - Workplans
Action: Well Installation Workplan
Action Date: 10/1/2015
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 9/10/2015
Received Issue Date: 9/10/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6262277&temptable=ENFORCEMENT
Title Description Comments:

Findings Report Review

Action Type: Response Requested - Reports
Action: Monitoring Report - Quarterly
Action Date: 7/1/2015
Received Issue Date: 8/26/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5840149
Title Description Comments:

Action Type: Response Requested - Reports
Action: Soil and Water Investigation Report
Action Date: 5/4/2015
Received Issue Date: 8/19/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5840152
Title Description Comments:

Enviro Work Plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 4/20/2015
Received Issue Date: 4/20/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6243989&temptable=ENFORCEMENT
Title Description Comments:

Monitoring Report Review

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 2/11/2015
Received Issue Date: 2/11/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6236741&temptable=ENFORCEMENT
Title Description Comments:

Monitoring Report Review

Action Type: Response Requested - Reports
Action: Monitoring Report - Quarterly
Action Date: 2/2/2015
Received Issue Date: 2/2/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5819657
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 1/22/2015
Received Issue Date: 1/22/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6235127&temptable=ENFORCEMENT
Title Description Comments:

Work Plan Review

Action Type: Response Requested - Workplans
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded
Action Date: 1/9/2015
Received Issue Date: 1/9/2015
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5828993
Title Description Comments:

Site Assessment Workplan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 10/20/2014
Received Issue Date: 10/20/2014
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6225267&temptable=ENFORCEMENT
Title Description Comments:

Report Review

Action Type: Other Regulatory Actions
Action: Site Visit / Inspection / Sampling
Action Date: 10/1/2014
Received Issue Date: 10/1/2014
Doc Link:
Title Description Comments:

Site Inspection for well locations and status

Action Type: Response Requested - Workplans
Action: Site Investigation Workplan - Regulator Responded
Action Date: 9/3/2014
Received Issue Date: 9/3/2014
Doc Link:
Title Description Comments:

Additional Investigation Workplan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 5/22/2014
Received Issue Date: 5/22/2014
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6204702&temptable=ENFORCEMENT
Title Description Comments:

Work Plan Review

Action Type: Response Requested - Other
Action: Correspondence
Action Date: 4/21/2014
Received Issue Date: 5/9/2014
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 3/19/2014
Received Issue Date: 3/19/2014
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6197226&temptable=ENFORCEMENT
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Site Visit / Inspection / Sampling
Action Date: 2/7/2014
Received Issue Date: 2/7/2014
Doc Link:
Title Description Comments:

Site Status Inspection; site is occupied by a walnut tree orchard, maintained and producing. No evidence of prior development.

Action Type: Response Requested - Workplans
Action: Soil and Water Investigation Workplan - Regulator Responded
Action Date: 1/5/2014
Received Issue Date: 5/9/2014
Doc Link:
Title Description Comments:

WP to evaluate whether or not petroleum constituents in the shallow soil at the site pose a significant risk to human health through intrustion to indoor air - refer to Staff letter of 05/22/2014, Work Plan dated 5/09/2014

Action Type: Other Regulatory Actions
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)
Action Date: 9/19/2012
Received Issue Date: 9/19/2012
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6394606&temptable=ENFORCEMENT
Title Description Comments:

PRELIM 5-YEAR REVIEW

Action Type: Response Requested - Workplans
Action: Preliminary Site Assessment Workplan - Regulator Responded
Action Date: *7/7/2010
Received Issue Date: 9/3/2014
Doc Link: https://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0603100122&doc_id=5580218
Title Description Comments:

Preliminary Site Assessment Work Plan - See letter dated 10/20/2014

Action Type: Response Requested - Other
Action: Correspondence
Action Date: 7/7/2010
Received Issue Date: 5/9/2014
Doc Link:
Title Description Comments:

Contact John Whiting

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 6/7/2010
Received Issue Date: 6/7/2010
Doc Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6053959&temptable=ENFORCEMENT
Title Description Comments:

Overdue Response

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 12/5/2006
Received Issue Date: 12/5/2006
Doc Link:
Title Description Comments:

Site assessment work plan comments

Action Type: Response Requested - Workplans
Action: Soil and Water Investigation Workplan
Action Date: 11/1/2006
Received Issue Date: 11/17/2006
Doc Link:
Title Description Comments:

Soil and Water Investigation Workplan - Site assessement work plan

Action Type: Other Regulatory Actions
Action: Staff Letter
Action Date: 8/14/2006
Received Issue Date: 8/14/2006
Doc Link:
Title Description Comments:

Letter to new RP - submit work plan

Action Type: Enforcement/Orders
Action: Warning Letter
Action Date: 9/15/2005
Received Issue Date: 9/15/2005
Doc Link:
Title Description Comments:

Work Plan

Action Type: Other Regulatory Actions
Action: Site Visit / Inspection / Sampling
Action Date: 12/16/2004
Received Issue Date: 12/16/2004
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action: Site Visit / Inspection / Sampling
Action Date: 4/12/2004
Received Issue Date: 4/12/2004
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action: File review
Action Date: 4/1/2004

Received Issue Date: 4/1/2004
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 10/17/1991
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Reported
Action Date: 10/17/1991
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Stopped
Action Date: 10/17/1991
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action: Other (Use Description Field)
Action Date:
Received Issue Date:
Doc Link:
Title Description Comments:

Natural Attenuation

GeoTracker Search - Site Maps (as of September 25, 2024)

Submitted: 10/8/2014
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: GEO_MAP
Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_map/4199815273/T0603100122.PDF

GeoTracker Search - Documents (as of September 25, 2024)

Document Type: Site Documents ***Document Date:*** 11/12/2019
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Submitted By: MICHEALE EASLEY (REGULATOR)
Title: VERBERG BROS CASE CLOSURE LETTER
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6420465

Document Type: Site Documents ***Document Date:*** 11/12/2019
Type: CLOSURE SUMMARY ***Submitted:***
Submitted By: MICHEALE EASLEY (REGULATOR)
Title: CASE CLOSURE SUMMARY
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6420464

Document Type: Site Documents ***Document Date:*** 10/15/2019
Type: WELL DESTRUCTION REPORT ***Submitted:***
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: WELL ABANDONMENT REPORT
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2952688395/T0603100122.PDF

Document Type: Site Documents ***Document Date:*** 1/14/2019

Type: STAFF LETTER **Submitted:**
Submitted By: HAYA QUTOB (REGULATOR)
Title: OVERDUE WELL DESTRUCTION/SITE RESTORATION REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6382976

Document Type: Site Documents **Document Date:** 6/7/2018
Type: STAFF LETTER **Submitted:**
Submitted By: MICHEALE EASLEY (REGULATOR)
Title: SITE INSPECTION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6369740

Document Type: Site Documents **Document Date:** 3/23/2018
Type: REQUEST FOR CLOSURE **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: VERBERG BROS, HANFORD-ARMONA WELL ABANDONMENT REPORT
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2304062128/T0603100122.PDF

Document Type: Site Documents **Document Date:** 1/30/2018
Type: STAFF LETTER **Submitted:**
Submitted By: NATASHA OCEGUEDA (REGULATOR)
Title: WELL DESTRUCTION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6347291

Document Type: Site Documents **Document Date:** 10/26/2017
Type: STAFF LETTER **Submitted:**
Submitted By: KENNETH D. JONES (REGULATOR)
Title: PRECLOSURE PUBLIC NOTIFICATION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6339950

Document Type: Site Documents **Document Date:** 10/26/2017
Type: LETTER - NOTICE **Submitted:**
Submitted By: KENNETH D. JONES (REGULATOR)
Title: PUBLIC NOTICE - CASE CLOSURE CONSIDERATION
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6339951

Document Type: Site Documents **Document Date:** 10/18/2017
Type: RESPONSE TO COMMENTS **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: TABLE UPDATE
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8447577118/T0603100122.PDF

Document Type: Site Documents **Document Date:** 10/9/2017
Type: RESPONSE TO COMMENTS **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: FEE TITLE SURVEY
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2831414997/T0603100122.PDF

Document Type: Site Documents **Document Date:** 8/23/2017
Type: FILE REVIEW - CLOSURE **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: REVIEW - SITE HISTORY/CONCEPTUAL SITE MODEL/CLOSURE CHECKLIST
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6334809

Document Type: Site Documents **Document Date:** 7/7/2017
Type: REQUEST FOR CLOSURE **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: SITE HISTORY / CONCEPTUAL SITE MODEL / CLOSURE CHECKLIST
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6340471267/T0603100122.PDF

Document Type: Monitoring Reports **Document Date:** 4/21/2017
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 1ST QUARTER MONITORING
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6417100906/T0603100122.PDF

Document Type: Site Documents **Document Date:** 2/23/2017
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: REVIEW - GROUNDWATER MONITORING REPORT

Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6312773

Document Type: Monitoring Reports **Document Date:** 1/24/2017
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 4TH QUARTER MONITORING
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1479331672/T0603100122.PDF

Document Type: Site Documents **Document Date:** 10/4/2016
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: REVIEW - QUARTERLY MONITORING REPORT Q3 2016
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6301992

Document Type: Site Documents **Document Date:** 9/13/2016
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: REVIEW - GROUNDWATER MONITORING REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6298724

Document Type: Monitoring Reports **Document Date:** 8/26/2016
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 3RD QUARTER MONITORING REPORT
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4635667800/T0603100122.PDF

Document Type: Monitoring Reports **Document Date:** 8/4/2016
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 2ND QUARTER MONITORING AND INSTALLATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3288984835/T0603100122.PDF

Document Type: Site Documents **Document Date:** 4/26/2016
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: GROUNDWATER MONITORING REPORT
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6283323

Document Type: Site Documents **Document Date:** 3/31/2016
Type: WELL INSTALLATION REPORT **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: MONITORING WELL INSTALLATION AND 1ST QUARTER MONITORING
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5246759772/T0603100122.PDF

Document Type: Site Documents **Document Date:** 2/1/2016
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: WORK PLAN REVIEW - ADDITIONAL INVESTIGATION WORK PLAN
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6275347

Document Type: Site Documents **Document Date:** 1/19/2016
Type: WELL INSTALLATION WORKPLAN **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: MONITORING WELL WORKPLAN
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7732093572/T0603100122.PDF

Document Type: Site Documents **Document Date:** 1/19/2016
Type: WELL INSTALLATION WORKPLAN **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: MONITORING WELL WORKPLAN - REGULATOR RESPONSE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&document_id=5877160

Document Type: Site Documents **Document Date:** 12/15/2015
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: GROUNDWATER MONITORING REPORT REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6270436

Document Type: Monitoring Reports **Document Date:** 10/16/2015

Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 3RD QUARTER
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8847380220/T0603100122.PDF

Document Type: Site Documents **Document Date:** 9/10/2015
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: FINDINGS REPORT REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6262277

Document Type: Site Documents **Document Date:** 8/6/2015
Type: SOIL VAPOR INTRUSION INVESTIGATION REPORT **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: SOIL VAPOR INVESTIGATION
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3443899571/T0603100122.PDF

Document Type: Monitoring Reports **Document Date:** 6/10/2015
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 2ND QUARTER 2015 MONITORING REPORT
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5173173904/T0603100122.PDF

Document Type: Site Documents **Document Date:** 4/20/2015
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: MONITORING REPORT REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6243989

Document Type: Monitoring Reports **Document Date:** 3/19/2015
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 1ST QUARTER MONITORING 2015
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1338797867/T0603100122.PDF

Document Type: Site Documents **Document Date:** 2/11/2015
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: MONITORING REPORT REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6236741

Document Type: Monitoring Reports **Document Date:** 1/30/2015
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: 4TH QUARTER 2014
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7152422070/T0603100122.PDF

Document Type: Site Documents **Document Date:** 1/22/2015
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: WORK PLAN REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6235127

Document Type: Site Documents **Document Date:** 1/9/2015
Type: SOIL VAPOR INTRUSION INVESTIGATION WORKPLAN **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: SITE ASSESSMENT WORKPLAN
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1830985367/T0603100122.PDF

Document Type: Site Documents **Document Date:** 1/9/2015
Type: SOIL VAPOR INTRUSION INVESTIGATION WORKPLAN **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: SITE ASSESSMENT WORKPLAN - REGULATOR RESPONSE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&document_id=5828993

Document Type: Site Documents **Document Date:** 10/20/2014

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: REPORT REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6225267

Document Type: Site Documents **Document Date:** 10/8/2014
Type: SOIL AND WATER INVESTIGATION REPORT **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: SITE ASSESSMENT, MONITORING WELL INSTALLATION AND QUARTERLY MONITORING THIRD QUARTER 2014
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3146537542/T0603100122.PDF

Document Type: Site Documents **Document Date:** 5/22/2014
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: WORK PLAN REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6204702

Document Type: Site Documents **Document Date:** 5/9/2014
Type: SITE INVESTIGATION WORKPLAN **Submitted:**
Submitted By: JAMES ROBINSON (AUTH_RP)
Title: ADDITIONAL INVESTIGATION WORKPLAN
Title Link: https://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3304114639/T0603100122.PDF

Document Type: Site Documents **Document Date:** 3/19/2014
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: STAFF LETTER
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6197226

Document Type: Site Documents **Document Date:** 9/19/2012
Type: CLEAN UP FUND - CASE CLOSURE REVIEW SUMMARY REPORT (RSR) **Submitted:**
Submitted By: (REGULATOR)
Title: PRELIM 5-YEAR REVIEW
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6394606

Document Type: Site Documents **Document Date:** 6/7/2010
Type: STAFF LETTER **Submitted:**
Submitted By: COLE HANNEL (REGULATOR)
Title: OVERDUE RESPONSE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0603100122&enforcement_id=6053959

Document Type: Site Documents **Document Date:** 11/26/2007
Type: LETTER **Submitted:**
Submitted By: (REGULATOR)
Title: UNDERGROUND STORAGE TANK RELEASE - 8/06
Title Link: https://geotracker.waterboards.ca.gov/site_documents/6916889786/VerburgBros%20LTR%208%2D06%2Epdf

Document Type: Site Documents **Document Date:** 11/20/2007
Type: WORKPLAN **Submitted:**
Submitted By: (REGULATOR)
Title: WORKPLAN SUMMARY & COMMENTS - 12/06
Title Link: https://geotracker.waterboards.ca.gov/site_documents/3746784806/VerburgBros%20SAWP%2011%2D06%2Epdf

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m-13-820198001-b **13** | **1 of1** | **ENE** | **0.50 / 2,625.66** | **244.15 / 0** | **KRAZAN SITE**
1702 LACEY BLVD
HANFORD CA 93230
dd-LUST-820198001-bb p1p-820198001-v1v **LUST**

Global ID: T0603100143
Site Facility Type: LUST CLEANUP SITE
Site Fac Type (SRCH): LUST CLEANUP SITE
Status:
Status (SRCH): COMPLETED - CASE CLOSED
Status (DL): Completed - Case Closed
Status Date (DL): 8/2/1995
Cleanup Status: COMPLETED - CASE CLOSED
Case Type (DL): LUST Cleanup Site
Oil Field (SRCH):
Oil Field Oper (SRCH):
Census Tract (SRCH): 6031000100
Latitude (DL): 36.3281373
Longitude (DL): -119.4895202
RWQCB Region (DL): CENTRAL VALLEY RWQCB (REGION 5F)

Site Facility Name (SRCH):	KRAZAN SITE
Address (SRCH):	1702 LACEY BLVD
City (SRCH):	HANFORD
Zip (SRCH):	93230
County (SRCH):	KINGS
Street No (DL):	1702
Street Name (DL):	LACEY BLVD
City (DL):	HANFORD
Zip (DL):	93230
County (DL):	Kings
State (DL):	CA
Business Name (DL):	KRAZAN SITE
Site Facility Name:	KRAZAN SITE
Address :	1702 LACEY BLVD
City :	HANFORD
Zip :	93230
County :	KINGS
Report Source:	LUST Cleanup Sites & Military UST Site from GeoTracker Project Search Results Export; LUST Cleanup Sites & Military UST Site from GeoTracker Cleanup Sites Data Download; LUST Cleanup Sites from GeoTracker Search (as of February 15, 2024)

GeoTracker Sites Data Download - Site Details

CUF Case:	
Lead Agency:	KINGS COUNTY
Case Worker:	UNK
Local Agency:	KINGS COUNTY
RB Case No:	5T16000151
Local Case No:	
File Location:	
Potential COC:	Gasoline
Potential Media of Concern:	Soil
Begin Date:	8/1/1995
How Discovered:	Other Means
How Discovered Description:	
Stop Method:	
Stop Description:	
Calwater Watershed Name:	South Valley Floor - Kaweah Delta (558.10)
DWR GW Subbasin Name:	San Joaquin Valley - Kaweah (5-022.11)
Disadvantaged Community:	Disadvantaged Community
CalEnvScreen Score:	
Coordinate Source:	Google Geocode
Discharge Cause:	Physc / Mech Damage
Discharge Source:	Piping
EPA Region:	9
Leak Reported Dt:	1995-08-02 00:00:00
Military DoD Site:	No
No Further Action Dt:	1995-08-02 00:00:00
Qty Rlsd Gallons:	
Facility Project Sub Type:	
Calenviroscreen 3 Score:	71-75%
Calenviroscreen 4 Score:	75-80%
Claim No:	
Claim Status:	
Site History:	

GeoTracker Sites Data Download - Regulatory Contacts

Contact Type:	Regional Board Caseworker
Contact Name:	JOHN WHITING
Organization Name:	CENTRAL VALLEY RWQCB (REGION 5F)
Address:	1685 E STREET
City:	FRESNO
Email:	john.whiting@waterboards.ca.gov
Phone No:	

Contact Type: Local Agency Caseworker - Primary Caseworker
Contact Name: UNK
Organization Name: KINGS COUNTY
Address:
City: r5 UNKNOWN
Email:
Phone No:

GeoTracker Sites Data Download - Status History

Status: Completed - Case Closed
Status Date: 8/2/1995

Status: Open - Case Begin Date
Status Date: 8/1/1995

GeoTracker Search - Regulatory Profile (as of September 25, 2024)

Site Facility Name: KRAZAN SITE
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Address: 1702 LACEY BLVD
City: HANFORD
Zip: 93230
County: KINGS
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0603100143
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 8/2/1995
Project Status:
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0603100143&tabname=regulatoryhistory
Potential COC: GASOLINE
Potential Media of Concern: SOIL
File Location:
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND, PROC, REC_1, REC_2
DWR GW Sub Basin: San Joaquin Valley - Kaweah (5-022.11)
Calwater Watershed Name: South Valley Floor - Kaweah Delta (558.10)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: KINGS COUNTY (LEAD)
CASE MANAGER: UNK
CENTRAL VALLEY RWQCB (REGION 5F) - CASE #: 5T16000151
CASE MANAGER: JOHN WHITING
CUF Claim No:
CUF Priority Assig:
CUF Amount Paid:
WDR Place Type:
WDR File No:
WDR Order No:
Project Oversight Agencies:
Facility Type:
Composting Method:
Grndwtr Monitoring Frequency:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply, Industrial Process Supply, Water Contact Recreation, Non-Contact Water Recreation
Site History:

No site history available

GeoTracker Search - Cleanup Status History (as of September 25, 2024)

Status: Completed - Case Closed
Date : 8/2/1995

Status: Open - Case Begin Date
Date : 8/1/1995

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

GeoTracker Search - Regulatory Activities (as of September 25, 2024)

Action Type: Leak Action
Action: Leak Reported
Action Date: 8/2/1995
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Discovery
Action Date: 8/1/1995
Received Issue Date:
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action: Leak Stopped
Action Date: 8/1/1995
Received Issue Date:
Doc Link:
Title Description Comments:

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m-14-866001165-b **14** | ***1 of1*** | ***NNW*** | ***0.91 / 4,821.16*** | ***246.57 / 3*** | ***CANADY 13TH AVENUE SITE 9431 13TH AVENUE HANFORD CA 93230*** | dd-ENVIROSTOR-866001165-bb r1:p-866001165-r1k- ***ENVIROSTOR***

Estor/EPA ID: 16010001
Site Code: 100557
Nat Priority List: NO
APN: NONE SPECIFIED
Census Tract: 6031001001
Site Type: VOLUNTARY AGREEMENT
Address Description: 9431 13TH AVENUE
Office: CLEANUP SAN JOAQUIN
Special Program: VOLUNTARY AGREEMENT - STANDARD VOLUNTARY AGREEMENT
Funding: SITE PROPONENT
Assembly District: 33
Senate District: 16
Permit Renewal Lead:
Public Partici Spclst:
Project Manager:
County: KINGS
Latitude: 36.3391211280721
Longitude: -119.690767788357
Acres: 2 ACRES
Supervisor: KEVIN SHADDY
Cleanup Status: NO FURTHER ACTION AS OF 8/29/1995
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District:
Past Use that Caused Contam: AGRICULTURAL - ROW CROPS, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE
Potential Media Affected: SOIL
Potential Contamin of Concern:

DDE
DDT
DICOFOL

Site History:

The Site consists of two acres located on a 100-acre property owned by Bratton Development, James Bratton et al. (Bratton) at 9431 13th Avenue, Hanford California. Bratton property consists of three separate parcels. The two areas comprising the Site consist of; APN 006-142-043 (2.5 arces) identified as the residential area, and approximately 5 acres located in the north central portion of APN 006-142- 053 (92.94 acres total), identified as the former dairy area. The balance of the property has been, and is currently in, agricultural production. The Canady 13th Avenue Site status was entered into CalSites as Site Screening Required (SSR) on January 15, 1992. In October 1994, Bratton contacted DTSC concerning the possibility of changing the site status to "No Further Action", based on sampling results from the Phase One EA which was prepared in conjunction with a pending sale of the property. DTSC reviewed the Phase One EA and on the basis of this review determined that a Preliminary Endangerment Assessment (PEA) was needed. Upon being informed of this, Bratton, through discussion with DTSC, decided to pursue the PEA process under the Voluntary Cleanup Program (VCA) working with DTSC's Clovis Site Mitigation Unit. During the Phase One EA, 4,4'-DDE and 4,4'-DDT were detected at concentrations of 0.041 and 0.031 ppm respectively in a composite sample made up of four discrete samples. In addition to DDE and DDT, Phorate (Thimet) was detected at 8.1 ppm. This information, indicating that a release of hazardous substances had occurred on-site, formed the basis for DTSC's Site Evaluation Unit's recommendation that a PEA be conducted. DTSC contact with Bratton was minimal from this time until submittal of the PEA report, and subsequent finalization of the VCA. According to the PEA Report, one soil sample collected from near a small storage shed was found to contain concentrations of

DDE and DDT which exceeded their corresponding PRGs of 1.3 mg/kg for each constituent. Additional sampling to determine the extent of contamination in this area was conducted resulting in the identification of one additional pesticide, dicofol, being detected in excess of its corresponding PRG of 1.0 mg/kg. Bratton elected to conduct a removal action to address this area prior to entering into a VCA and without DTSC oversight. As a result of the removal action all soils containing chemical concentrations exceeding PRGs were removed from the Site. Using the maximum concentration of contaminants remaining in site soils, the total cancer risk associated with the Site has been calculated in the PEA to be 1.1 x 10(6) and the hazard index has been calculated to be .2 for the hypothetical population at highest risk, on-site residents. DTSC has determined that use of 95% upper confidence limit concentrations for the contaminants present would result in a decrease in the calculated risk to on site residents. Based upon DTSC's evaluation of the information/reports submitted, the Site does not appear to pose a threat to human health or the environment under a residential land use. Therefore, DTSC determines that no further action is necessary with respect to investigation and remediation of hazardous substances at the Site.

Status: NO FURTHER ACTION
Program Type: VOLUNTARY CLEANUP
CalEnviroScreen Score: 65-70%
Summary Link: https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=16010001

Completed Activities

Title: Site Screening
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=16010001&doc_id=5014509
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Screening
Date Completed: 2/2/1995
Comments:

Title: Voluntary Cleanup Agreement Completion
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=16010001&enforcement_id=5014506
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: *Voluntary Cleanup Agreement Completion
Date Completed: 10/30/1995
Comments:

Title: VCA
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Standard Voluntary Agreement
Date Completed: 7/6/1995
Comments:

Title: Preliminary Endangerment Assessment Report
Title Link: https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=16010001&doc_id=5014507
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Report
Date Completed: 8/29/1995
Comments: DTSC reviewed a PEA and made a finding of "No Further Action". Acres of land returned/released for reuse: 100.44 (property transaction). Based on: Evaluated and found no significant risk; any land use allowed - in accordance with local planning a zoning requirement.

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

Deleted NPL: DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). 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. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Sep 25, 2024

SEMS List 8R Active Site Inventory: rr-SEMS-bb SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: Oct 24, 2024

Inventory of Open Dumps, June 1985: rr-ODI-bb ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: rr-SEMS ARCHIVE-bb SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Oct 24, 2024

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: rr-CERCLIS-bb CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: rr-IODI-bb IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: rr-CERCLIS NFRAP-bb CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: rr-CERCLIS LIENS-bb CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: rr-RCRA CORRACTS-bb RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Oct 21, 2024

RCRA non-CORRACTS TSD Facilities: rr-RCRA TSD-bb

RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Oct 21, 2024

RCRA Generator List: rr-RCRA LQG-bb

RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Oct 21, 2024

RCRA Small Quantity Generators List: rr-RCRA SQG-bb

RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Oct 21, 2024

RCRA Very Small Quantity Generators List: rr-RCRA VSQG-bb

RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Oct 21, 2024

RCRA Non-Generators: rr-RCRA NON GEN-bb

RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) 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. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Oct 21, 2024

RCRA Sites with Controls: rr-RCRA CONTROLS-bb

RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Oct 21, 2024

Federal Engineering Controls-ECs: rr-FED ENG-bb

FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Nov 20, 2024

Federal Institutional Controls- ICs: rr-FED INST-bb

FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Nov 20, 2024

Land Use Control Information System: rr-LUCIS-bb

LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: rr-NPL IC-bb

NPL IC

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Sep 25, 2024

Emergency Response Notification System: rr-ERNS 1982 TO 1986-bb

ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: rr-ERNS 1987 TO 1989-bb

ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: rr-ERNS-bb

ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Oct 15, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: rr-FED BROWNFIELDS-bb

FED BROWNFIELDS

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 protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing: rr-FEMA UST-bb

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: rr-FRP-bb

FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans: rr-DELISTED FRP-bb

DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations: rr-HIST GAS STATIONS-bb

HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: rr-REFN-bb

REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals: rr-BULK TERMINAL-bb

BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Oct 31, 2024

LIEN on Property: rr-SEMS LIEN-bb

SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Oct 24, 2024

Superfund Decision Documents: rr-SUPERFUND ROD-bb

SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Oct 24, 2024

Formerly Utilized Sites Remedial Action Program: rr-DOE FUSRAP-bb

DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database serves a purpose similar to that of the federal NPL, functioning as a state-level counterpart for prioritizing cleanup efforts at hazardous substance release sites.

Government Publication Date: Sep 25, 2024

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Sep 25, 2024

Delisted State Response Sites: DELISTED ENVS

Sites removed from the list of State Response Sites made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).

Government Publication Date: Sep 25, 2024

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.

Government Publication Date: Oct 26, 2024

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF

This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.

Government Publication Date: Sep 20, 2006

Waste Management Unit Database: WMUD

The Waste Management Unit Database System tracks and inventories waste management units. CCR Title 27 contains criteria stating that Waste Management Units are classified according to their ability to contain wastes. Containment shall be determined by geology, hydrology, topography, climatology, and other factors relating to the ability of the Unit to protect water quality. Water Code Section 13273.1 requires that operators submit a water quality solid waste assessment test (SWAT) report to address leak status. The WMUDS was last updated by the State Water Resources control board in 2000.

Government Publication Date: Jan 1, 2000

EnviroStor Hazardous Waste Facilities: HWP

A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.

Government Publication Date: Sep 25, 2024

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT

In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.

Government Publication Date: Dec 31, 1995

Construction and Demolition Debris Recyclers: C&D DEBRIS RECY

This listing of Construction and Demolition Debris Recyclers is maintained by the California Intergrated Waste Management Board-common C&D materials include lumber, drywall, metals, masonry (brick, concrete, etc.), carpet, plastic, pipe, rocks, dirt, paper, cardboard, or green waste related to land development.

Government Publication Date: Jun 20, 2018

Recycling Centers: RECYCLING

This list of Certified Recycling Centers that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 2, 2025

Listing of Certified Processors:

rr-PROCESSORS-bb

PROCESSORS

This list of Certified Processors that are operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 2, 2025

Listing of Certified Dropoff, Collection, and Community Service Programs:

rr-CONTAINER RECY-bb

CONTAINER RECY

This list of Certified Dropoff, Collection, and Community Service Programs (non-buyback) operating under the state of California's Beverage Container Recycling Program is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Jan 2, 2025

Land Disposal Sites:

rr-LDS-bb

LDS

Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.

Government Publication Date: Sep 25, 2024

Leaking Underground Fuel Tank Reports:

rr-LUST-bb

LUST

List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.

Government Publication Date: Sep 25, 2024

Delisted Leaking Storage Tanks:

rr-DELISTED LST-bb

DELISTED LST

List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.

Government Publication Date: Jan 15, 2025

Permitted Underground Storage Tank (UST) in GeoTracker:

rr-UST-bb

UST

List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).

Government Publication Date: Nov 17, 2024

Proposed Closure of Underground Storage Tank Cases:

rr-UST CLOSURE-bb

UST CLOSURE

This listing includes Proposed Closure of Underground Storage Tank (UST) Cases which are being considered for closure by either the State Water Resources Control Board at a Future Board Meeting or the Executive Director that have been posted for a 60-day public comment period, and Closure of UST Cases with Closure Denials and Approved Orders. The lists are provided by the California Water Boards.

Government Publication Date: Oct 26, 2024

Historical Hazardous Substance Storage Information Database:

rr-HHSS-bb

HHSS

The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.

Government Publication Date: Aug 27, 2015

Statewide Environmental Evaluation and Planning System:

rr-UST SWEEPS-bb

UST SWEEPS

The Statewide Environmental Evaluation and Planning System (SWEEPS) is a historical listing of active and inactive underground storage tanks made available by the California State Water Resources Control Board (SWRCB).

Government Publication Date: Oct 1, 1994

Aboveground Storage Tanks:

rr-AST-bb

AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

SWRCB Historical Aboveground Storage Tanks: AST SWRCB rr-AST SWRCB-bb

A list of aboveground storage tanks made available by the California State Water Resources Control Board (SWRCB). Effective January 1, 2008, the Certified Unified Program Agencies (CUPAs) are vested with the responsibility and authority to implement the Aboveground Petroleum Storage Act (APSA).

Government Publication Date: Dec 1, 2007

Oil and Gas Facility Tanks: TANK OIL GAS rr-TANK OIL GAS-bb

Locations of oil and gas tanks that fall under the jurisdiction of the Geologic Energy Management Division of the California Department of Conservation (CalGEM) (CCR 1760). CalGEM was formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR).

Government Publication Date: Nov 14, 2024

Delisted Storage Tanks: DELISTED TNK rr-DELISTED TNK-bb

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Nov 14, 2024

California Environmental Reporting System (CERS) Tanks: CERS TANK rr-CERS TANK-bb

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. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Oct 28, 2024

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK rr-DELISTED CTNK-bb

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Oct 28, 2024

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK rr-HIST TANK-bb

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR rr-LUR-bb

The Department of Toxic Substances Control (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 land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Sep 25, 2024

CALSITES Database: CALSITES rr-CALSITES-bb

This historical database was maintained by the Department of Toxic Substance Control (DTSC) for more than a decade. CALSITES contains information on Brownfield properties with confirmed or potential hazardous contamination. In 2006, DTSC introduced EnviroStor as the latest Brownfields site database.

Government Publication Date: May 1, 2004

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR rr-HLUR-bb

The Department of Toxic Substances Control (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.

Government Publication Date: Feb 18, 2021

Deed Restrictions and Land Use Restrictions: DEED rr-DEED-bb

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Jan 15, 2025

Voluntary Cleanup Program: rr-VCP-bb VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Sep 25, 2024

GeoTracker Cleanup Program Sites: rr-CLEANUP SITES-bb CLEANUP SITES

A list of Cleanup Program sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Sep 25, 2024

Delisted Cleanup Program Sites: rr-DELISTED CLEANUP-bb DELISTED CLEANUP

A list of Cleanup Program sites which were once included - and have since been removed from - the list of Cleanup Program Sites in GeoTracker. GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Government Publication Date: Jan 15, 2025

Delisted County Records: rr-DELISTED COUNTY-bb DELISTED COUNTY

Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Oct 28, 2024

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: rr-INDIAN LUST-bb INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Underground Storage Tanks on Tribal/Indian Lands: rr-INDIAN UST-bb INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 9, which includes California, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Leaking Storage Tanks: rr-DELISTED INDIAN LST-bb DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 18, 2024

Delisted Tribal Underground Storage Tanks: rr-DELISTED INDIAN UST-bb DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 18, 2024

County

Kings County - Underground Storage Tanks: rr-UST KINGS-bb UST KINGS

List of Underground Storage Tanks made avaiable by Kings County Environmental Health Services.

Government Publication Date: Dec 3, 2020

Kings County - CUPA Facility List: rr-CUPA KINGS-bb CUPA KINGS

A list of facilities associated with various Certified Unified Program Agency (CUPA) programs in Kings County. This list is made available by Kings County Department of Public Health which is appointed as CUPA for the county.

Government Publication Date: Dec 3, 2020

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: Aug 5, 2024

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Aug 1, 2024

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Dec 17, 2024

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

r-PFAS-FED-SITES-bb

This list of federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is made available by the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools data. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Oct 24, 2024

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

r-PFAS-SSEHRI-bb

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Jun 27, 2024

National Response Center PFAS Spills: PFAS ERNS

r-PFAS-ERNS-bb

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Dec 9, 2024

PFAS NPDES Discharge Monitoring: PFAS NPDES

r-PFAS-NPDES-bb

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Dec 16, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

r-PFAS-TRI-bb

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

r-PFAS-WATER-bb

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Jul 22, 2024

PFAS TSCA Manufacture and Import Facilities: rr-PFAS-TSCA-bb

PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : rr-PFAS-E-MANIFEST-bb

PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Dec 15, 2024

PFAS Industry Sectors: rr-PFAS-IND-bb

PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Dec 16, 2024

Hazardous Materials Information Reporting System: rr-HMIRS-bb

HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: May 29, 2024

National Clandestine Drug Labs: rr-NCDL-bb

NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data 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.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: rr-TSCA-bb

TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

r-HIST TSCA-bb

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

r-FTTS ADMIN-bb

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

r-FTTS INSP-bb

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

r-PRP-bb

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Nov 20, 2024

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

r-SCRD DRYCLEANER-bb

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

r-ICIS-bb

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Apr 13, 2024

Drycleaner Facilities: FED DRYCLEANERS

r-FED DRYCLEANERS-bb

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2024

Delisted Drycleaner Facilities:

rr-DELISTED FED DRY-bb

DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2024

Formerly Used Defense Sites:

rr-FUDS-bb

FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites:

rr-FUDS MRS-bb

FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites:

rr-FORMER NIKE-bb

FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents:

rr-PIPELINE INCIDENT-bb

PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS):

rr-MLTS-bb

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites:

rr-HIST MLTS-bb

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

rr-MINES-bb

MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites: rr_SMCRA-bb

SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data 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. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: May 20, 2024

Mineral Resource Data System: rr_MRDS-bb

MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: rr_LM_SITES-bb

LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: rr_ALT_FUELS-bb

ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 29, 2024

Superfunds Consent Decrees: rr_CONSENT_DECREES-bb

CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Jun 26, 2024

Air Facility System: rr_AFS-bb

AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: rr_SSTS-bb

SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers: rr-PCBT-bb PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: rr-PCB-bb PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

Power Plants: rr-POWER PLANTS-bb POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Apr 15, 2024

State

PFAS Sampling Locations: rr-PFAS SAMPLING-bb PFAS SAMPLING

This data is sourced from the State Water Board's GeoTracker Per- and Polyfluoroalkyl Substances (PFAS) Map tool which contains individual sampling points (i.e., soil boring, groundwater monitoring well, drinking water well for municipal drinking water systems, etc.) or a site location with PFAS analytical data. Includes analytical results that are finalized and submitted electronically by the Responsible Parties via GeoTracker's Electronic Submittal of Information Portal, and after it's accepted by a Regional Water Quality Control Board.

Government Publication Date: Dec 6, 2024

Dry Cleaning Facilities: rr-DRYCLEANERS-bb DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Dec 20, 2021

Delisted Drycleaners: rr-DELISTED DRYCLEANERS-bb DELISTED DRYCLEANERS

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Jan 31, 2022

Non-Toxic Dry Cleaning Incentive Program: rr-DRYC GRANT-bb DRYC GRANT

A list of grant recipients of the Non-Toxic Dry Cleaning Incentive Program made available by the California Air Resources Board (CARB). The program provides grants to eligible dry cleaning businesses to assist them in transitioning away from PERC machines to alternative non-toxic and non-smog forming technologies.

Government Publication Date: Jan 31, 2022

PFAS GeoTracker Cleanup Sites: rr-PFAS GT CLEANUPS-bb PFAS GT CLEANUPS

A list of applicable cleanup sites from the State Water Resources Control Board's (SWRCB) GeoTracker data management system where one or more of the potential contaminants of concern are identified in the PFAS Structure List and/or PFAS Chemicals Without Explicit Structure List made available by the United States Environmental Protection Agency (US EPA).

Government Publication Date: Jan 15, 2025

PFOA/PFOS Groundwater: rr-PFAS GW-bb

PFAS GW

A list of water wells from the Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System with the groundwater chemical perfluorooctanoic acid (PFOA) (NL = 0.014 UG/L) or perfluorooctanoic sulfonate (PFOS) (NL = 0.013 UG/L). The GAMA Groundwater Information System search is made available by California Water Boards.

Government Publication Date: Dec 1, 2024

PFAS Investigations: rr-PFAS INVEST-bb

PFAS INVEST

This list of potential Per- and Polyfluoroalkyl Substance (PFAS) sites is compiled from the California State Water Resources Control Board's (SWRCB) PFAS Investigations Map tool. The SWRCB issued investigative orders, per California Water Code (CWC) Section 13267 and/or 13383, to these sites. Orders were also issued to the public water systems to sample wells in the vicinity of these locations. Military facilities have been identified by the Department of Defense (DOD) as part of their efforts to investigate PFAS per the Defense Environmental Restoration Program (DERP) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The data includes locations for Airports, Chrome Plating Facilities, Landfills, Publicly Owned Treatment Works, Refineries and Bulk Terminals, DOD Facilities, and Monitored Drinking Water Wells being investigated for potential PFAS.

Government Publication Date: Jan 23, 2024

Hazardous Waste and Substances Site List - Site Cleanup: rr-HWSS CLEANUP-bb

HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Mar 15, 2023

Toxic Pit Cleanup Act Sites: rr-TOXIC PITS-bb

TOXIC PITS

The Toxic Pits Cleanup Act (TPCA) list identifies sites suspected of containing hazardous substances where cleanup has not yet been completed. This list was maintained by the State Water Resources Control Board (SWRCB), is not longer maintained, and updates are not planned.

Government Publication Date: Jul 1, 1995

List of Hazardous Waste Facilities Subject to Corrective Action: rr-DTSC HWF-bb

DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

EnviroStor Inspection, Compliance, and Enforcement: rr-INSP COMP ENF-bb

INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked by the California Department of Toxic Substance Control's (DTSC) EnviroStor data management system.

Government Publication Date: Nov 23, 2023

School Property Evaluation Program Sites: rr-SCH-bb

SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Sep 25, 2024

California Hazardous Material Incident Report System (CHMIRS): rr-CHMIRS-bb

CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This listing has been made available by the California Governor's Office of Emergency Services (Cal OES).

Government Publication Date: Oct 21, 2024

Historical California Hazardous Material Incident Report System (CHMIRS): rr-HIST CHMIRS-bb

HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Handlers from Hazardous Waste Manifest Data: r-HAZNET-bb HAZNET

A list of handlers not otherwise classified as Treatment, Storage, Disposal facilities (TSDF) or generators from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Oct 24, 2016

Generators from Hazardous Waste Manifest Data: r-HAZ GEN-bb HAZ GEN

List of handlers listed as having generated waste from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

TSDF from Hazardous Waste Manifest Data: r-HAZ TSD-bb HAZ TSD

List of Treatment, Storage, and Disposal Facilities (TSDFs) from the facilities and manifests data made available by the California Department of Toxic Substances Control (DTSC) in their Hazardous Waste Tracking System (HWTS).

Government Publication Date: Dec 31, 2017

Historical Hazardous Waste Manifest Data: r-HIST MANIFEST-bb HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

DTSC Registered Hazardous Waste Transporters: r-HW TRANSPORT-bb HW TRANSPORT

The California Department of Toxic Substances Control (DTSC) maintains this list of Registered Hazardous Waste Transporters.

Government Publication Date: Jan 2, 2025

Registered Waste Tire Haulers: r-WASTE TIRE-bb WASTE TIRE

This list of registered waste tire haulers is maintained by the California Department of Resources Recycling and Recovery.

Government Publication Date: Oct 28, 2024

California Medical Waste Management Program Facility List: r-MEDICAL WASTE-bb MEDICAL WASTE

This list of Medical Waste Management Program Facilities is maintained by the California Department of Public Health. The Medical Waste Management Program (MWMP) regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (MWMA). The MWMP permits and inspects all medical waste off-site treatment facilities, medical waste transporters, and medical waste transfer stations. This list contains transporters, treatment, and transfer facilities.

Government Publication Date: Sep 5, 2024

Historical Cortese List: r-HIST CORTESE-bb HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: r-CDO/CAO-bb CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Dec 6, 2021

California Environmental Reporting System (CERS) Hazardous Waste Sites: r-CERS HAZ-bb CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Oct 28, 2024

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: r-DELISTED HAZ-bb DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Nov 29, 2018

Sites in GeoTracker: GEOTRACKER rr-GEOTRACKER-bb

GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. This is a list of sites in GeoTracker that aren't otherwise categorized as LUST, Land Disposal Sites (LDS), Cleanup Sites, or sites having Waste Discharge Requirements (WDR). This listing includes program types such as Underground Injection Control (UIC), Confined Animal Facilities (CAF), Irrigated Lands Regulatory Program, plans, and non-case information.

Government Publication Date: Sep 25, 2024

Mines Listing: MINE rr-MINE-bb

This list includes mine site locations extracted from the Mines Online database, maintained by the California Department of Conservation. Mines Online (MOL) is an interactive web map designed with GIS features that provide information such as the mine name, mine status, commodity sold, location, and other mine specific data. Please note: Mine location information is provided to assist experts in determining the location of mine operators in accordance with California Civil Code section 1103.4 and reflects information reported by mine operators in annual reports provided under Public Resources Code section 2207. While the Division of Mine Reclamation (DMR) attempts to populate MOL with accurate location information, the DMR cannot guarantee the accuracy of operator reported location information.

Government Publication Date: Oct 3, 2024

Recorded Environmental Cleanup Liens: LIEN rr-LIEN-bb

The California Department of Toxic Substance Control (DTSC) maintains this list of liens placed upon real properties. A lien is utilized by the DTSC to obtain reimbursement from responsible parties for costs associated with the remediation of contaminated properties.

Government Publication Date: Dec 18, 2023

Waste Discharge Requirements: WASTE DISCHG rr-WASTE DISCHG-bb

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Sep 25, 2024

Toxic Pollutant Emissions Facilities: EMISSIONS rr-EMISSIONS-bb

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program.

Government Publication Date: Dec 31, 2021

Clandestine Drug Lab Sites: CDL rr-CDL-bb

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jan 19, 2021

Tribal

No Tribal additional environmental record sources available for this State.

County

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

EXHIBIT C-2

GENERAL PUBLIC RECORDS

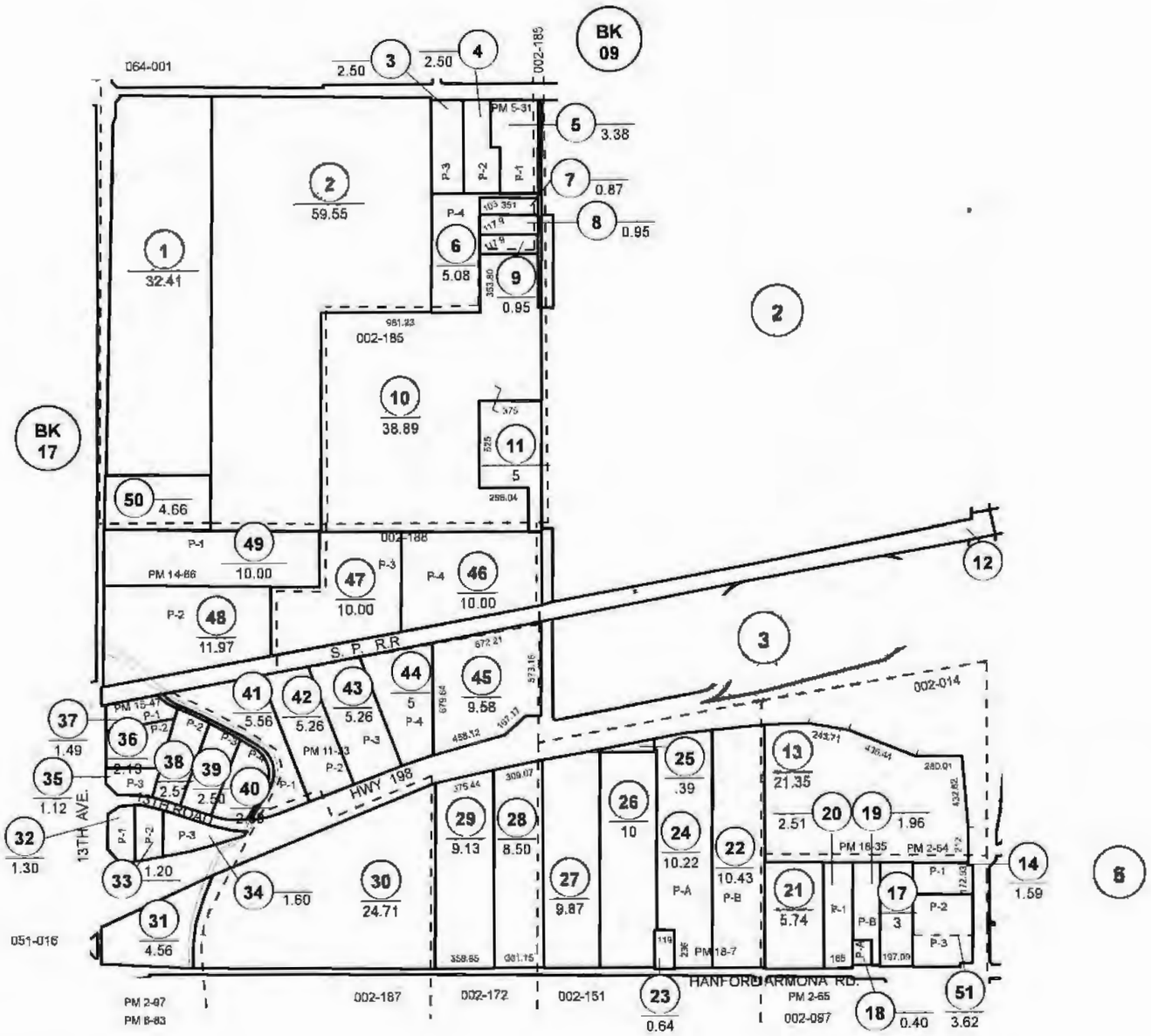
THIS MAP IS FOR ASSESSMENT PURPOSES ONLY.
IT IS NOT TO BE CONSTRUED AS PORTRAYING
LEGAL OWNERSHIP OF DIVISIONS OF LAND FOR
PURPOSES OF ZONING OR SUBDIVISION LAW.
JUNE 2022

PARCELQUEST

KINGS COUNTY ASSESSOR'S MAP

POR SEC 34/18-21

11-01



1" = 800'

1"

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APPENDIX D

INTERVIEW RECORDS

RECORD OF COMMUNICATION						
Project Name: Proposed Development				Location (city): Hanford, California		
Communication with: Raffi Karayan						
Of: Owner of Subject Property						
Location: Fresno, CA				Phone: 559 816-7280		
Communication via	**X**	Telephone		Letter		In Person
Recorded By: Paul Humphrey				Of: Paul Humphrey, EP		
At: (time): 0930				On (date): February 12, 2025		
Re: Property Use						
Summary of Communication: Mr. Karayan was not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Subject Property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Subject Property; or any notices from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Mr. Karayan indicated that he purchased the Subject Property in 2014 or 2015 and it has been lease farmed since ownership.						
Conclusions/Required Action/Follow-up: None						

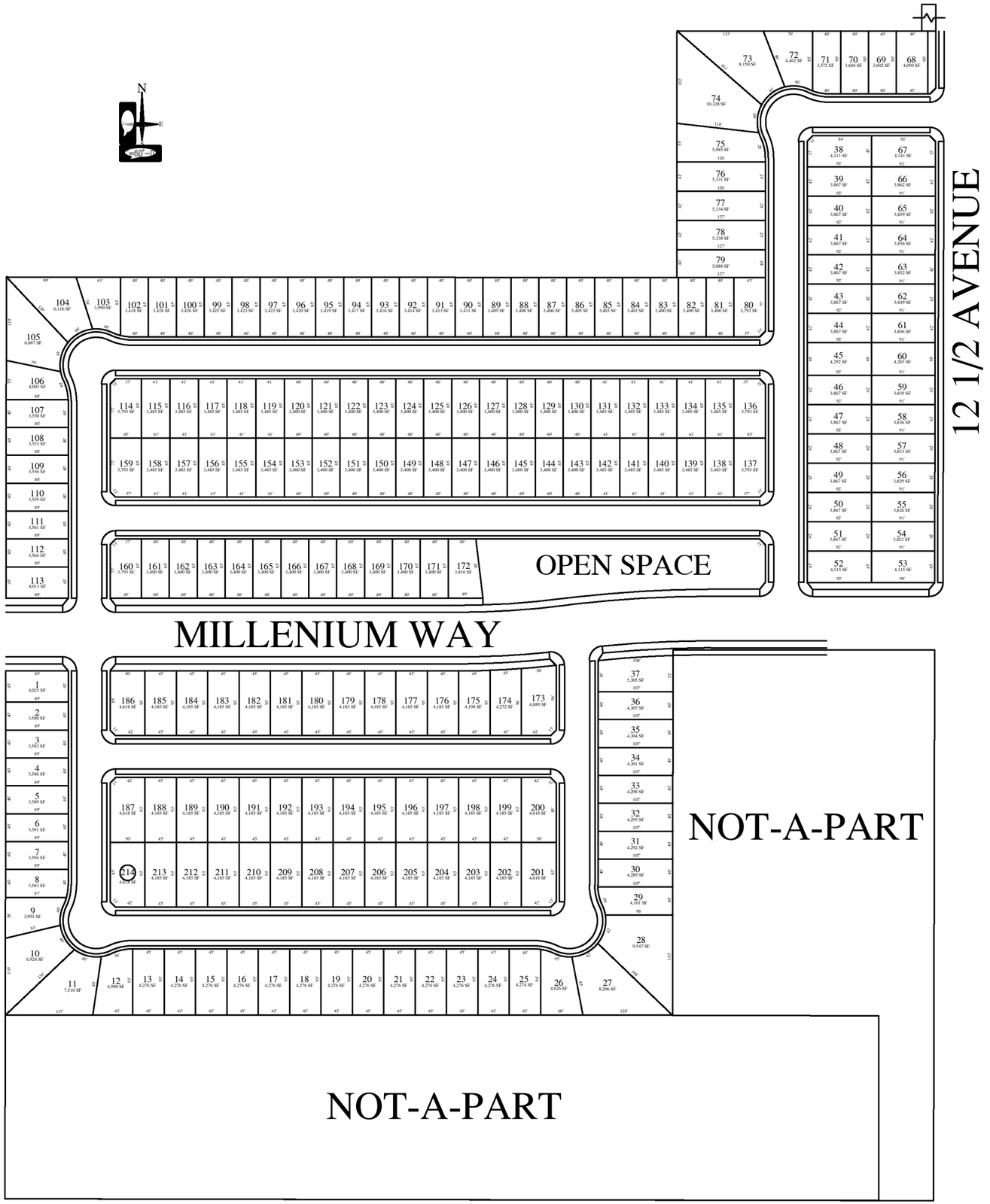
RECORD OF COMMUNICATION						
Project Name: Proposed Development				Location (city): Hanford, California		
Communication with: Clerk						
Of: Kings County Department of Environmental Health						
Location: Hanford, CA				Phone: 559-584-1401		
Communication via	**X**	Telephone		Letter		In Person
Recorded By: Paul Humphrey				Of: Paul Humphrey, EP		
At: (time): 1030				On (date): January 30, 2025		
Re: Records						
Summary of Communication: No records were identified.						
Conclusions/Required Action/Follow-up: None						

RECORD OF COMMUNICATION						
Project Name: Proposed Development				Location (city): Hanford, California		
Communication with: Clerk						
Of: Kings County Planning and Development Department						
Location: Hanford, CA				Phone: 559		
Communication via		Telephone		Letter	**X**	In Person
Recorded By: Paul Humphrey				Of: Paul Humphrey, EP		
At: (time): 1400				On (date): January 30, 2025		
Re: Records						
Summary of Communication: No records of land use limitations associated with the Subject Property.						
Conclusions/Required Action/Follow-up: None						

RECORD OF COMMUNICATION						
Project Name: Proposed Development				Location (city): Hanford, California		
Communication with: Receptionist						
Of: Kings County Fire						
Location: Hanford, CA				Phone: 559 582-3211		
Communication via	**X**	Telephone		Letter		In Person
Recorded By: Paul Humphrey				Of: Paul Humphrey, EP		
At: (time): 1445				On (date): January 30, 2025		
Re: Records						
Summary of Communication: According to the clerk, no record was identified for the Subject Property and the area is under the jurisdiction of the Kings County Department of Environmental Health.						
Conclusions/Required Action/Follow-up: None						

APPENDIX E

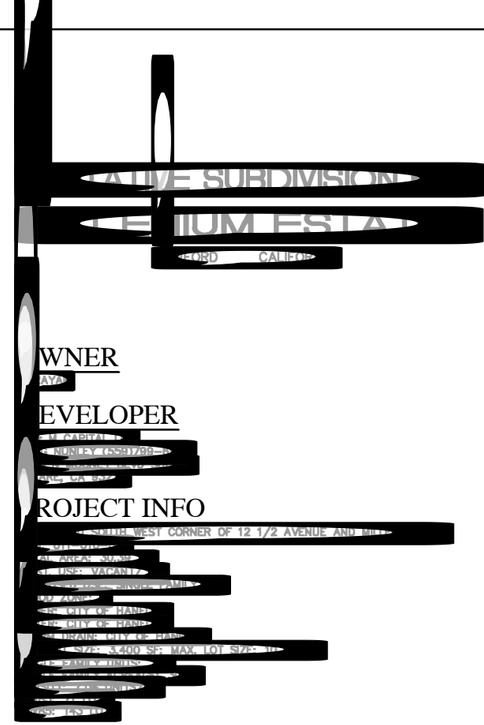
CLIENT PROVIDED DOCUMENTATION

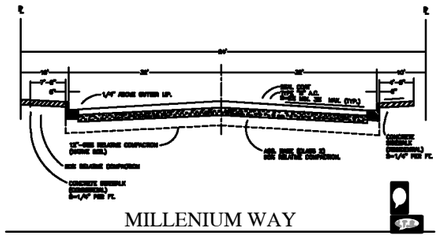


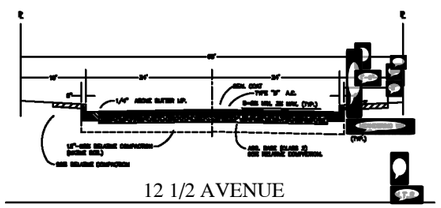
WNER

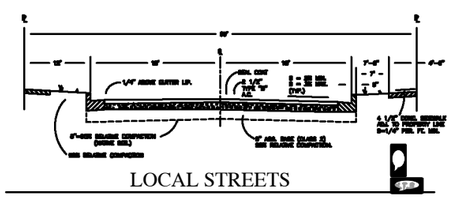
EVELOPER

ROJECT INFO




MILLENIUM WAY


12 1/2 AVENUE


LOCAL STREETS

SITE

APPENDIX F

OTHER SUPPORTING DOCUMENTATION

Zone 1 Highest Potential (greater than 4 pCi/L)

Zone 2 Moderate Potential (from 2 to 4 pCi/L)

Zone 3 Low Potential (less than 2 pCi/L)



PAUL HUMPHREY, EP
7402 E. CLINTON AVENUE
FRESNO, CALIFORNIA 93737
(559) 977-9813

RADON MAP

N↑

APPENDIX G

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Paul J. Humphrey, REPA, CAC

Education:	College of the Sequoias, Visalia, California
	Associate of Science in Biology, 1994
Licenses/Registrations:	Registered Environmental Property Assessor #827718
	Certified Asbestos Consultant, #03-3495
Years of Experience:	Twenty-Six

Summary of Professional Experience

Mr. Humphrey has more than twenty-five years experience in the environmental field including asbestos surveys, asbestos abatement monitoring and project design, environmental site assessment, soil and groundwater assessment and is an Environmental Professional as defined by the Environmental Protection Agency. Mr. Humphrey has conducted more than 2,000 Phase I Environmental Site Assessments of commercial, industrial, agricultural and multi-family residential properties in California, Nevada, Arizona, and Washington. Mr. Humphrey has more than two years experience in the ground-up development and management of a Hazardous Building Materials Department for a local environmental and engineering firm. Mr. Humphrey has also provided regulatory guidance, assessments, and asbestos surveys and monitoring to utility companies, flood control districts, public works departments, and branches of the military as part of facility expansion projects as well as new site development.

Mr. Humphrey's experience has included preliminary environmental assessments and various soil and groundwater investigations for highway expansion for the State of California Department of Transportation. Projects for the State of California highway expansion also included asbestos surveys of bridges and overpasses.

For a national environmental consulting firm, Mr. Humphrey served as Project Coordinator, where he performed and managed asbestos abatement oversight projects for national clients. Mr. Humphrey has also conducted environmental site assessments on multi-site industrial and commercial properties for various national financial institutions, developers, and property management companies. Assessments included limited and comprehensive surveys for asbestos, lead-based paint, lead-in-drinking-water and radon gas emissions.

Appendix E

Traffic Study

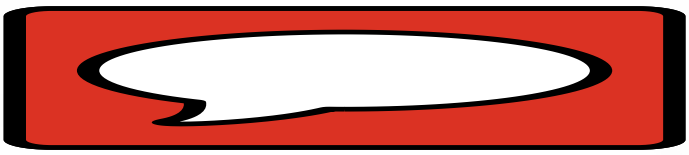
Traffic Evaluation

for the Millenium Estates Project

SUPPLIMENTAL REPORT

Hanford, California

July 2025



Prepared for:
Greg Nunley
1878 N. Mooney Blvd., Suite J
Tulare, CA 93274

Prepared by:
C2 Consult Corp
1401 Wewatta St., Suite 516
Denver, Co 80202

Charles Clouse, Principal



https://d.docs.live.net/1908e84e76e68192/Desktop/C2 Consult/Projects/1341.16 Nunley Development - Millenium Estates TA/Work Product/Millenium Estates Supplimental.doc

This report and the data contained herein have been prepared expressly for the purposes of this project. The use of this data, the conclusions contained in the report or the information provided herein by individuals or agencies is done so at their sole discretion and at their own responsibility. Publication of this document does not warrant the use of the data, the conclusions or the information for any purpose other than that described within this report.

TABLE OF CONTENTS

Page

CHAPTERS

CHAPTER 1 – INTRODUCTION ……..……1

CHAPTER 2 –EXISTING CONDITIONS PLUS
PREVIOUSLY APPROVED PROJECTS ……..…7

CHAPTER 3 – PROJECT DESCRIPTION ……..…13

CHAPTER 4 – EXISTING + PREVIOUSLY APPROVED PROJECTS
PLUS MILLENIUM ESTATES PROJECT ……..……15

APPENDISES

APPENDIX A – EXISTING PLUS PREVIOUSLY APPROVED PROJECTS
CONDITIONS – LEVEL OF SERVICE
CALCULATIONS……...……16

APPENDIX B – EXISTING PLUS PREVIOUSLY APPROVED PROJECTS PLUS
MILLENIUM ESTATES PROJECT CONDITIONS – LEVEL OF SERVICE
CALCULATIONS ……..……...…17

Traffic Evaluation

for the Millenium Estates Project

SUPPLIMENTAL REPORT

CHAPTER 1 – INTRODUCTION

Study Purpose
The report is a supplemental evaluation of the original assessment of the Millenium Estates Project. (May 2025) The original report evaluated a number of intersections under existing traffic conditions, as well as, conditions with the estimated traffic from the Millenium Estates Project. After review of that document, the City of Hanford requested that the intersection of Centennial at Millenium be reevaluated. This supplement evaluates this intersection with estimated traffic from four previously approved projects added to existing traffic. With this as a new baseline, projected traffic from the Millenium Estates Project was added to the existing plus approved projects traffic. For additional information including existing conditions and the Millenium Estates Project description , reference is made to the original study for Millenium Estates.

Analysis Methodology
Existing peak hour turn counts (AM and PM) will be collected for the existing study intersections. Based on the data collected, an existing conditions analysis will be prepared using the existing counts and lane configurations and intersection control. The study intersections will be analyzed using the *Highway Capacity Manual* methodologies. Signal warrants (peak hour only) will be prepared using the methodologies from the *California Manual on Uniform Traffic Control Devices (MUTCD) for Street and Highways*. Peak hour signal warrants at all study intersections will be prepared as appropriate.

All level of service analyses performed for this study conform to the practices of the *Highway Capacity Manual*, and were done using the traffic analysis software HCS (unsignalized and (signalized). For signalized intersections, this software allows for optimization of signal timings to minimize traffic delay at each intersection. This process can result in different signal cycle lengths for both the AM and PM peak hours of a given analysis scenario and may also vary between different scenarios. This optimization somewhat reflects traffic agency procedure

whereby intersection signal cycle lengths are adjusted for differing traffic conditions and times, based on counts of existing traffic volume.

For analysis purposes, HCM defines six levels of service for various facility types. The six levels are given letter designations ranging from "A" to "F", with "A" representing the best operating conditions and "F" the worst. Quantifiable measures of effectiveness that best describe the quality of operation on the subject facility type are used to determine the facilities level of service. For the case of both signalized and unsignalized intersections, the quantifiable measure of effectiveness is average control delay.[1]

Control delay for two-way stop-controlled (TWSC) intersections, which have stop signs on only the minor street approaches, is on a per-vehicle basis and is computed for the stop-controlled, minor-street movements and major street left turn movements only, because major-street through movements are theoretically in continual free-flow conditions and therefore experience no delay. Since there is no aggregation of delay for a TWSC intersection, there is no level of service for an intersection as a whole, but only levels of service for individual minor-street and major-street left turn movements.

The following table shows level of service ratings and their corresponding ranges of average control delay for both signalized and unsignalized intersections. For signalized intersections, it also contains a general description of traffic flow associated with each level of service.

Level of service for each study intersection in the various analysis scenarios are summarized in tables throughout the report. For signalized intersections, the level of service rating shown represents the overall level of service for the intersection as a whole. For stop-controlled intersections, the level of service rating shown is for each individual traffic movement (excluding major-street through movements) instead of the entire intersection.

Level of Service Standard
The City of Hanford's Policy T29 set's the maximum Level of Service at "E" on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. The City has set a peak hour Level of Service of "D" on all other streets and intersections with the Planned Growth Boundary.

[1] Control delay, according to the *2010 Highway Capacity Manual*, page 16-1, includes initial acceleration delay, queue move-up time, stopped delay, and final acceleration delay.

INTERSECTION LEVEL OF SERVICE DESCRIPTIONS			Allowable Delay	
			Signalized	Unsignalized [1]
Level of Service	**Conditions**	**Signalized Intersection Description**	**Delay (sec/veh)**	**Delay (sec/veh)**
"A"	Free Flow	*Users experience very low delay. Progression is favorable and most vehicles do not stop at all.*	≤10.0	≤10.0
"B"	Stable Operations	*Vehicles travel with good progression. Some vehicles stop, causing slight delay.*	>10.0 – 20.0	>10.0 – 15.0
"C"	Stable Operations	*Higher delays result from fair progression. A significant number of vehicles stop, although many continue to pass through the intersection without stopping.*	>20.0 to 35.0	>15.0 – 25.0
"D"	Approaching Unstable	*Congestion is noticeable. Progression is unfavorable, with more vehicles stopping rather than passing through the intersection.*	>35.0 – 55.0	>25.0 – 35.0
"E"	Unstable Operations	*Traffic volumes are at capacity. Users experience poor progression and long delays.*	>55.0 – 80.0	>35.0 – 50.0
"F"	Forced Flow	*Intersection's capacity is oversaturated, causing poor progression and unusually long delays.*	>80.0	>50.0

Source: Chapters 16 and 18, Highway Capacity Manual, Transportation Research Board.
[1]Unsignalizedintersections include TWSC and AWSC

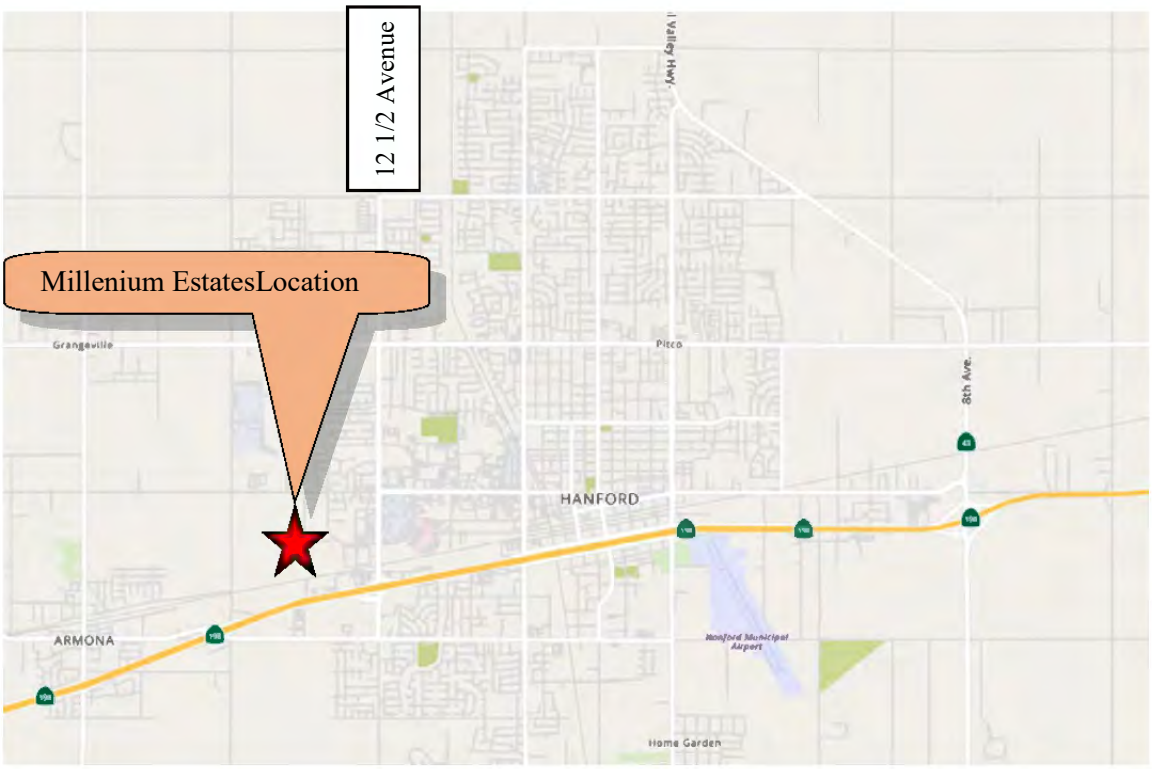


FIGURE 1: Vicinity Map



FIGURE 2: Project Location

CHAPTER 2 –EXISTING CONDITIONS PLUS PREVIOUSLY APPROVED PROJECTS

Four previously approved projects were identified by the City of Hanford. These projects have been approved by the City of Hanford. No previous traffic evaluations were completed for these projects. These approved projects are in close proximity to the intersection of Centennial at Millenium.

Previously Approved Projects

Tract 915 is located along 12 ½ Avenue at the Millenium Way intersection. It comprises 66 single family units and is currently under construction.

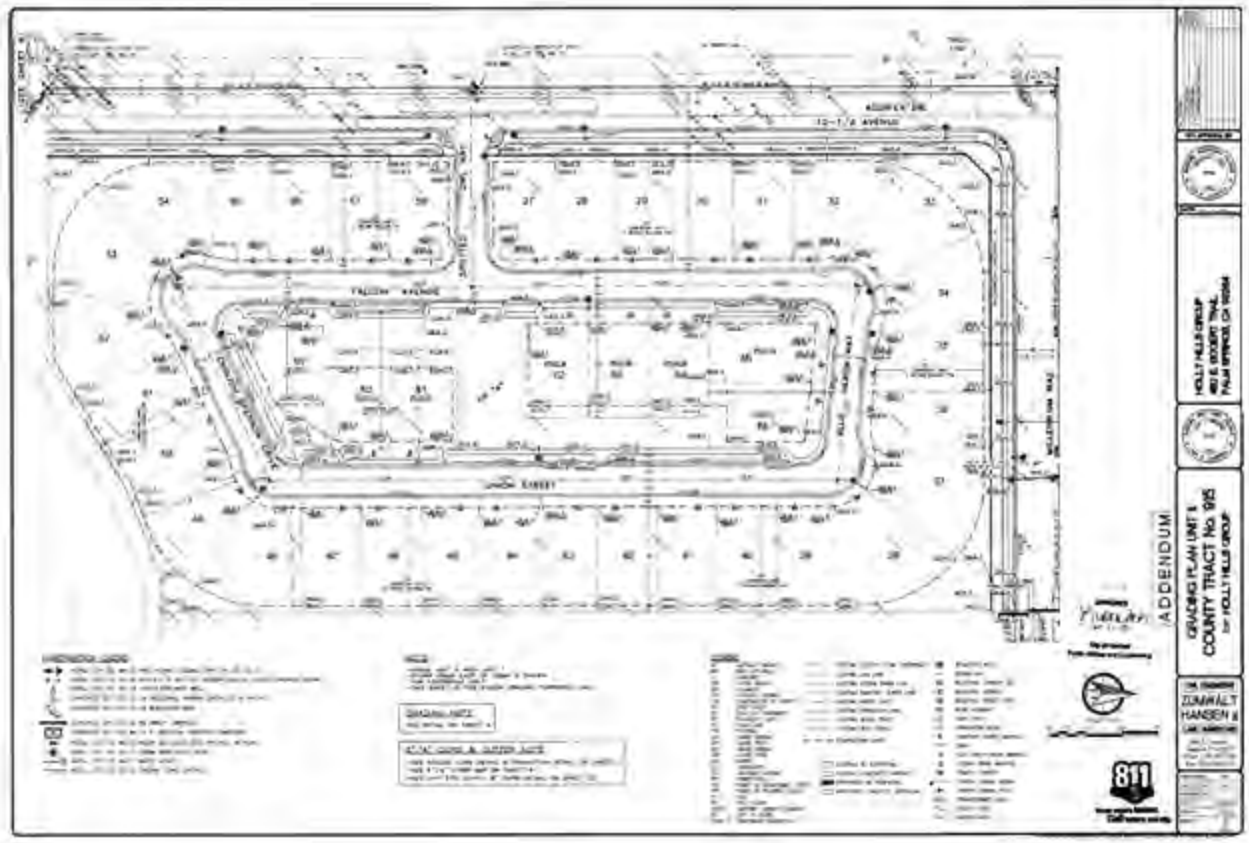


FIGURE 3: Tract 915 (southern portion)

The second approved project is the Village Apartments located at the northwest corner of Centennial at Millenium. The project is a 100 unit multi-family complex and is currently under construction.

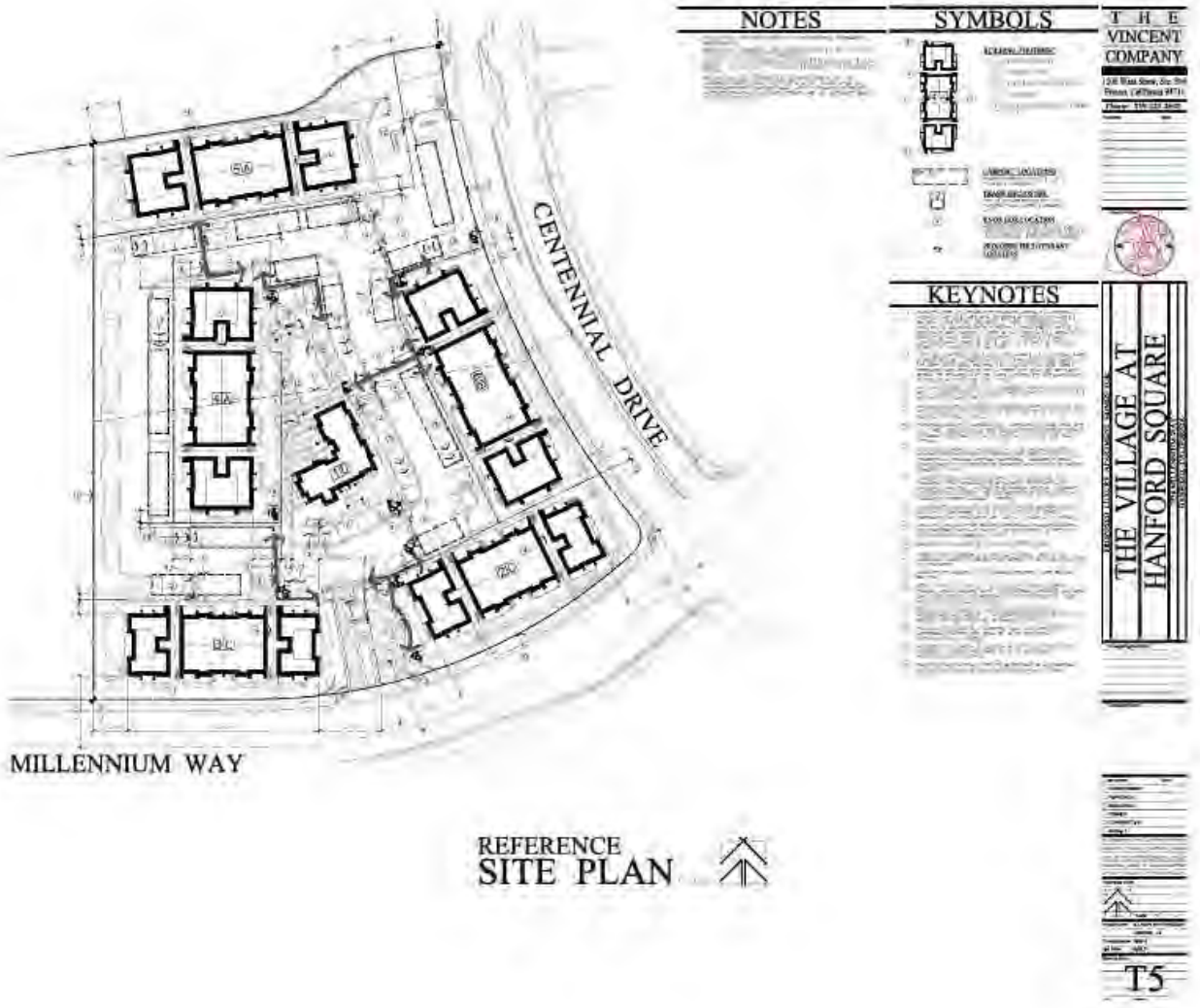


FIGURE 4: The Villate Apartment Project

The Camden Place Apartments are an approved project located on the west side of Centennial north of the Millenium Way intersection. This project will contain 216 multi-family units and has not begun construction.

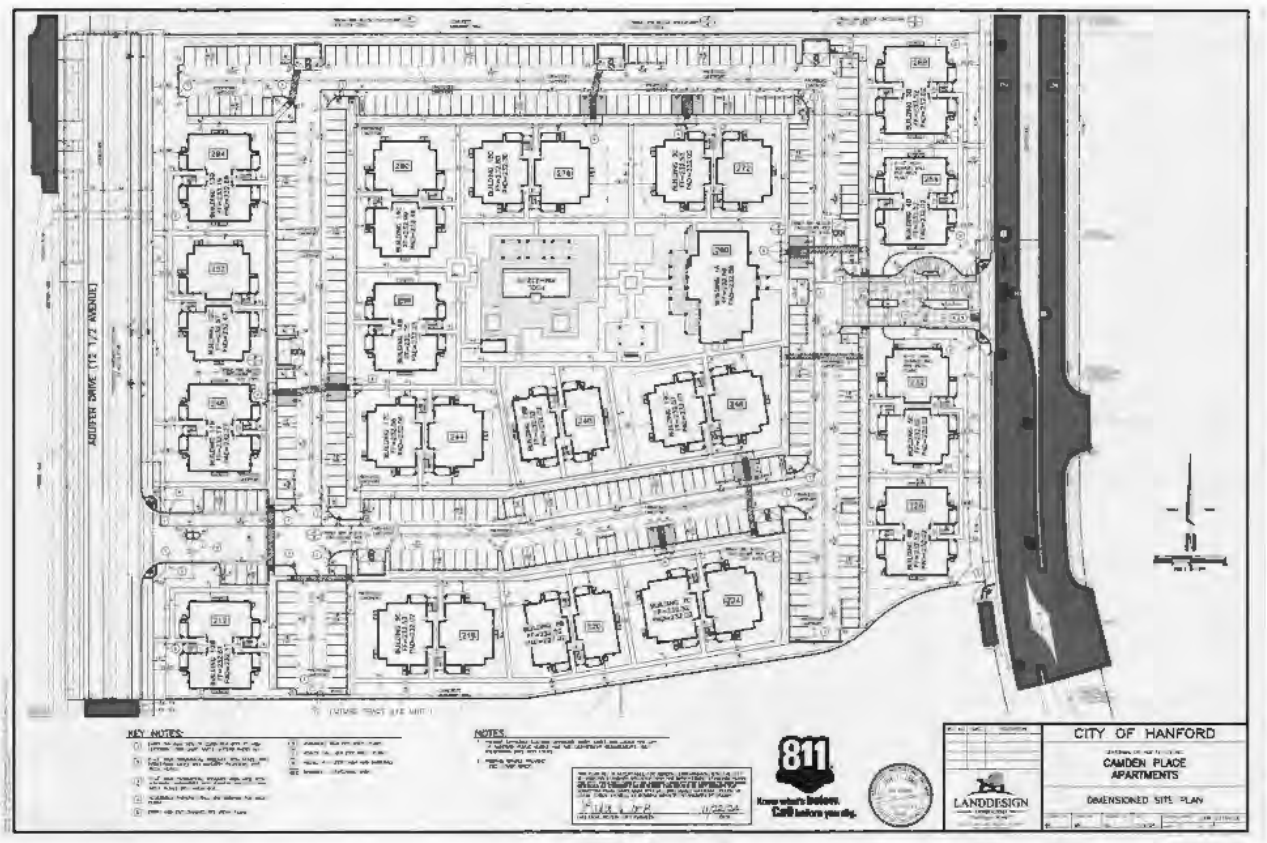


FIGURE 5: Camden Place Apartments

The fourth and final approved project is the Millennium Apartments located on the southwest corner of the intersection of Centennial at Millenium. The project will contain 216 multi-family units and has not begun construction.

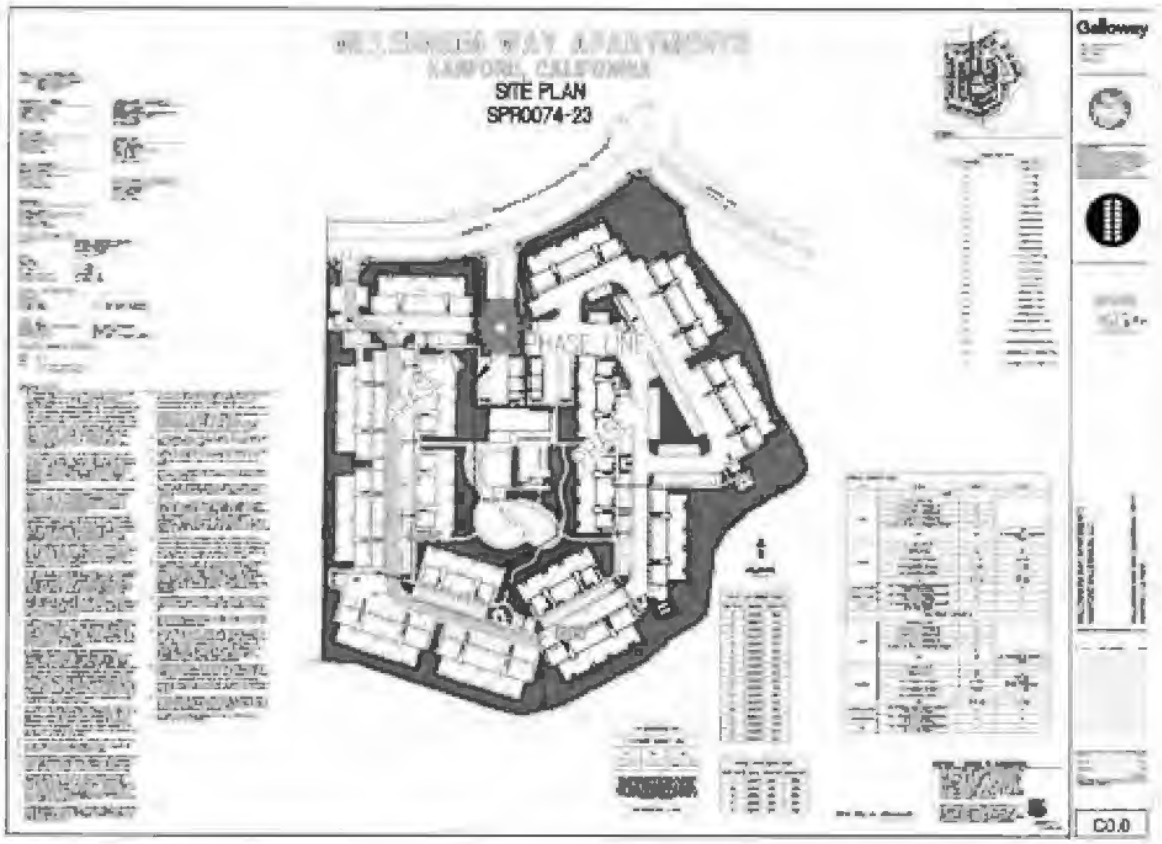


FIGURE 6: Millennium Apartments

Approved Projects Trip Generation

New trips generated by the four previously approved projects were estimated using the Institute of Transportation Engineer's *Trip Generation Manual.* This publication provides average rates of trip generation for different land uses and relates these to dwelling units (residential) and square footages (fast food and retail shops). Trip generation rates are provided for weekdays along with the proportion of trips that are inbound or outbound from the development. The resulting projects' trip generation is shown in **Table 1**. The estimated projects' vehicle trips yield 285 trips in the AM peak hour and 357 trips in the PM peak hour. The approved projects are estimated to generate a total of 4,324 daily trips.

Table 1
Approved Projects
Trip Genreation

Land Use	Units	Land Use Code	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
				Enter	Exit	Enter	Exit
Tract 915	66	210	688	13	38	42	25
Village Apartments	100	220	716	13	41	40	24
Camden Place Apartments	216	220	1,460	22	68	71	42
Millennium Apartments	216	220	1,460	22	68	71	42
Totals	**598**		**4,324**	**70**	**215**	**224**	**133**

Table 2
Approved Projects
Trip Distribution (percentage)

Peak Hour	AM		PM	
Direction	In	Out	In	Out
North	25%	25%	25%	25%
South (via 12th Av	30%	30%	30%	30%
East	30%	30%	30%	30%
West (via Lacey)	15%	15%	15%	15%
	100%	100%	100%	100%

Approved Projects Trip Distribution

The approved project distribution was developed from existing volumes of traffic surrounding the site. These percentages were used to distribute project trips to the study intersections. **Table 2** shows the trip distribution for both AM and PM peak hour trips to and from the approved project.

Approved Projects Trip Assignment

The specific project trip assignments at the intersections are shown in **Figure 7.** The assignments have been completed to reflect existing traffic volumes at the surrounding intersections and consideration of the approved project's trip generation profile.

Existing Conditions PLUS Previously Approved Projects

The conditions with trips generated from the approved projects were assessed by adding these new trips to the existing traffic volumes. The approved project's trip assignment (shown in **Figure 7)**, which were added to the existing volumes to estimate the existing plus Aproved Projects volumes. The combined peak hour traffic volumes used for this assessment are shown in **Figure 8**. The lane configurations at the intersection with the completion of the approved project were assumed to remain the same as existing.

The Level of Service Calculations for the Existing plus the Approved Projects can be seen in **Appendix A.** Based on the Existing plus Millenium Estates Project conditions assessment as shown in **Table 3**, the subject intersection is projected to operate well above the City's level of service target standard of "D" when the approved projects are completed.

Table 3
Existing Conditions PLUS Previously Approved Projects
Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Vehicle Delay	LOS	Vehicle Delay	LOS
Centennial Dr at Millenium				
Eastbound	13.2	B	14.7	B
Northbound	0.5	A	0.7	A
Southbound	0.7	A	0.4	A

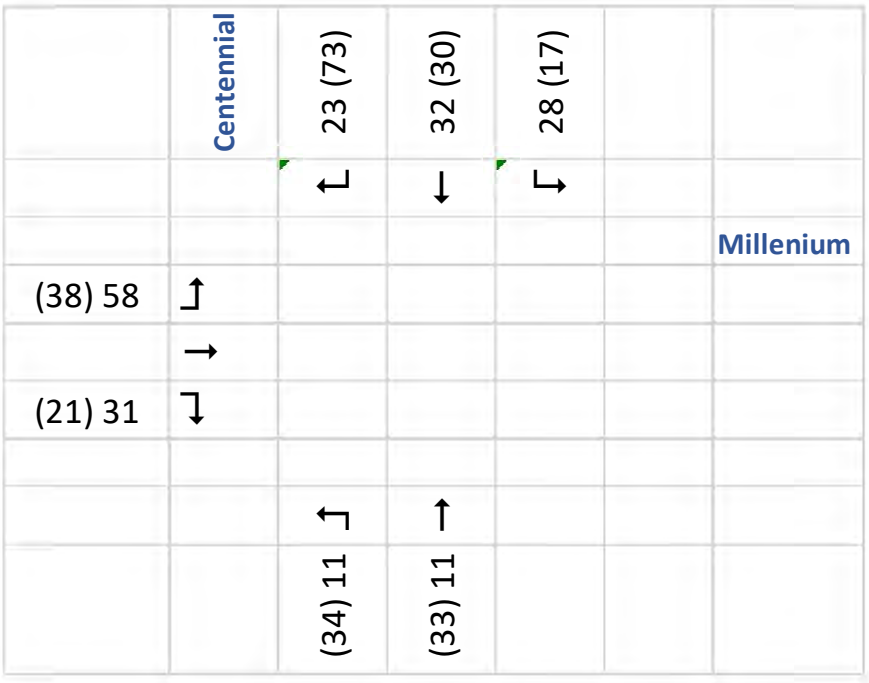


FIGURE 7: Approved Projects Trip Assignment

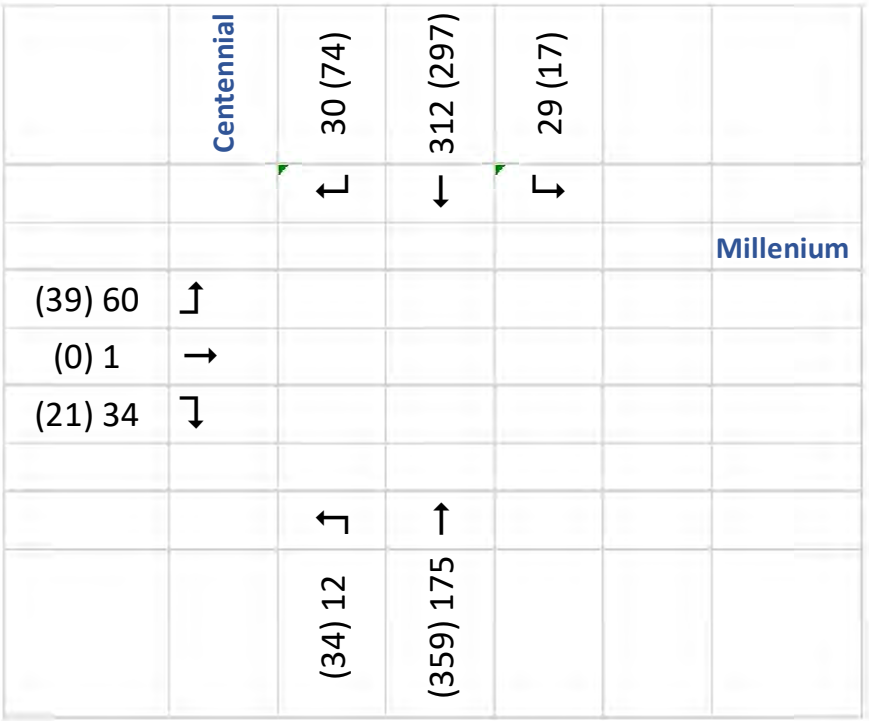


FIGURE 8: Existing PLUS Approved Projects Traffic Counts

CHAPTER 3 –PROJECT DESCRIPTION

The Project site totals 30.39 acres. **Figure 9** shows the proposed site plan.

Project Trip Generation

New trips generated by the Millenium Estates Project were estimated using the Institute of Transportation Engineer's *Trip Generation Manual.* This publication provides average rates of trip generation for different land uses and relates these to dwelling units (residential) and square footages (fast food and retail shops). Trip generation rates are provided for weekdays along with the proportion of trips that are inbound or outbound from the development. The resulting Project trip generation is shown in **Table 2**. The estimated Project's vehicle trips yield 147 trips in the AM peak hour and 200 trips in the PM peak hour. The Project is estimated to generate a total of 2,006 daily trips.

Table 4
Millenium Estates Project
Trip Genreation

Land Use	Units	Land Use Code	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
				Enter	Exit	Enter	Exit
Single family	211	210	2,006	37	110	126	74
Totals	**211**		**2,006**	**37**	**110**	**126**	**74**

Project Trip Distribution

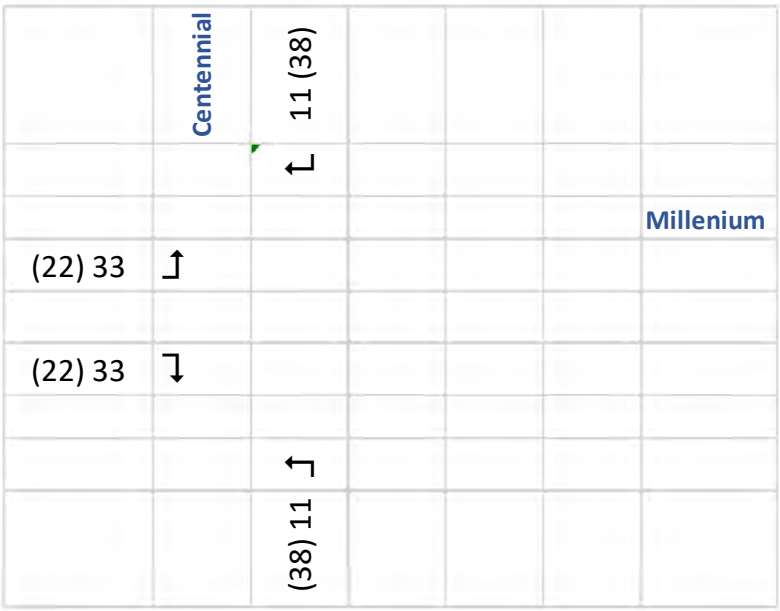
The Project distribution was developed from existing volumes of traffic surrounding the site. These percentages were used to distribute project trips to the study intersections.. **Table 3** shows the trip distribution for both AM and PM peak hour trips to and from the Millenium Estates Project.

Project Trip Assignment

The specific project trip assignments at the intersections are shown in **Figure 10.** The assignments have been completed to reflect existing traffic volumes at the surrounding intersections and consideration of the Millenium Estates trip generation profile.

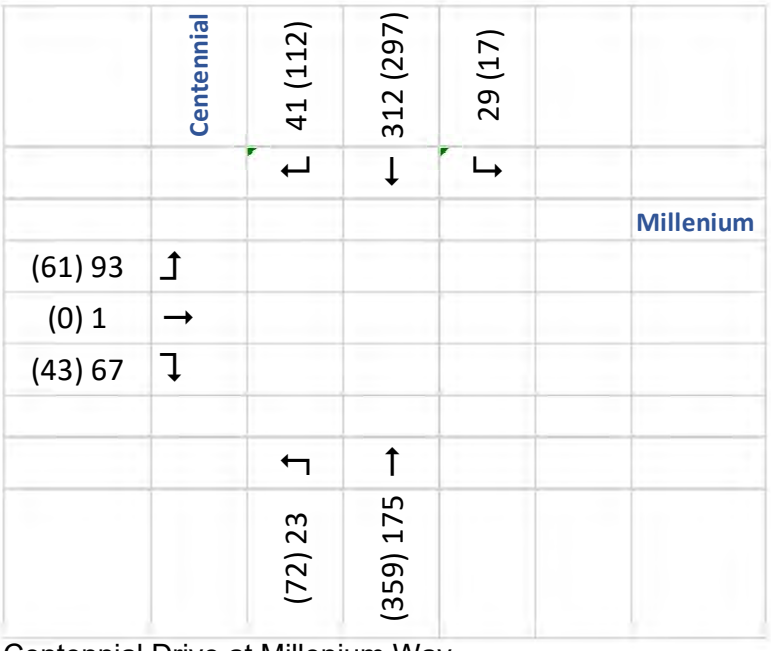
Table 5
Millenium Estates Project
Trip Distribution (percentage)

Peak Hour	AM		PM	
Direction	In	Out	In	Out
North	25%	25%	25%	25%
South (via 12th Ave)	30%	30%	30%	30%
East	30%	30%	30%	30%
West (via Lacey)	15%	15%	15%	15%
	100%	100%	100%	100%



Centennial Drive at Millenium Way

FIGURE 9: Millenium Estates Project Trip Assignment at Study Intersections



Centennial Drive at Millenium Way

FIGURE 10: Existing Plus Approved Projects **PLUS Millenium Estates** Traffic Counts

CHAPTER 4 – EXISTING + PREVIOUSLY APPROVED PROJECTS PLUS MILLENIUM ESTATES PROJECT

The conditions with trips generated from the Millenium Estates Project were assessed by adding the Project's net new trips to the existing plus approved projects' traffic volumes which were shown in **Figure 8**. The Project's trip assignment is shown in **Figure 9**, which were added to the existing plus approved project volumes to estimate the existing plus approved project plus Millenium Estates Project volumes. The combined peak hour traffic volumes used for this assessment are shown in **Figure 10**. The lane configurations at the intersection with the completion of the Millenium Estates Project were assumed to remain the same as existing.

The Level of Service Calculations for the Existing plus Approved Projects PLUS the Millenium Estates Project can be seen in **Appendix B.** Based on the Existing plus Approved Projects plus Millenium Estates Project conditions assessment as shown in **Table 6**, the subject intersection is projected to operate well above the City's level of service target standard of D.

Table 6
Existing Conditions + Previously Approved Projects PLUS Millenium Estates Project
Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Vehicle Delay	LOS	Vehicle Delay	LOS
Centennial Dr at Millenium				
Eastbound	14.2	B	17.5	C
Northbound	0.9	A	1.4	A
Southbound	0.6	A	0.4	A

Table 6
Millenium Estates Project
Traffic Impact Fee

Land Use		Units	Rate	Fee
Residential	Single family	211	$ 3,995.72	$ 843,096.92

Payment of City Impact Fee

The Millenium Estates Project will contribute to the overall circulation system through the payment of the City's Traffic Impact Fee. This fee will be used to fund and construct street improvements throughout the City Based on the current fee structure the Millenium Estates Project is estimated to contribute approximately $843,000 to this City fund (**Table 6**). This is an estimate based on the site plan shown in **Figure 9**.

Appendix A

Existing Plus Previously Approved Projects Conditions Level of Service Calculations

HCS Two-Way Stop-Control Report

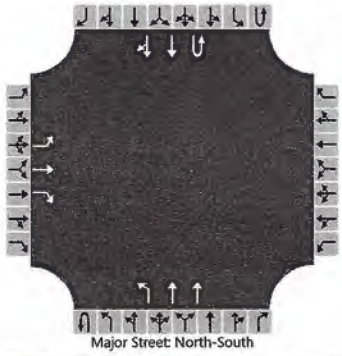
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/28/2025
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Existing plus Approved Projects

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L	T	R						L	T		U		T	TR
Volume (veh/h)		60	1	34					0	12	175		29		312	30
Percent Heavy Vehicles (%)		3	3	3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1			6.4			
Critical Headway (sec)		7.56	6.56	6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65	1	37						13			32			
Capacity, c (veh/h)		418	388	821						1176			1081			
v/c Ratio		0.16	0.00	0.04						0.01			0.03			
95% Queue Length, Q_{95} (veh)		0.5	0.0	0.1						0.0			0.1			
95% Queue Length, Q_{95} (ft)		12.8	0.0	2.6						0.0			2.6			
Control Delay (s/veh)		15.2	14.3	9.6						8.1			8.4			
Level of Service (LOS)		C	B	A						A			A			
Approach Delay (s/veh)		13.2								0.5				0.7		
Approach LOS		B								A				A		

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HCS Two-Way Stop-Control Report

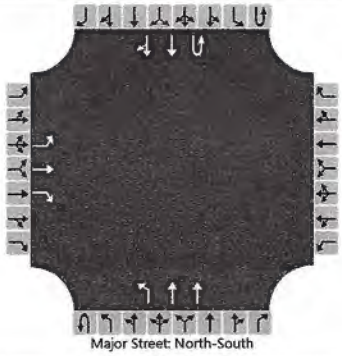
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	7/14/25
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Existing plus Approved Projects

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L	T	R						L	T		U		T	TR
Volume (veh/h)		39	0	21					0	34	359		17		297	74
Percent Heavy Vehicles (%)		3	3	3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1			6.4			
Critical Headway (sec)		7.56	6.56	6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		42	0	23						37			18			
Capacity, c (veh/h)		330	279	802						1145			808			
v/c Ratio		0.13	0.00	0.03						0.03			0.02			
95% Queue Length, Q_{95} (veh)		0.4	0.0	0.1						0.1			0.1			
95% Queue Length, Q_{95} (ft)		10.2	0.0	2.6						2.6			2.6			
Control Delay (s/veh)		17.5	17.9	9.6						8.2			9.6			
Level of Service (LOS)		C	C	A						A			A			
Approach Delay (s/veh)		14.7								0.7				0.4		
Approach LOS		B								A				A		

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Appendix B

Existing Plus Previously Approved Projects plus Millenium Estates Project Conditions Level of Service Calculations

HCS Two-Way Stop-Control Report

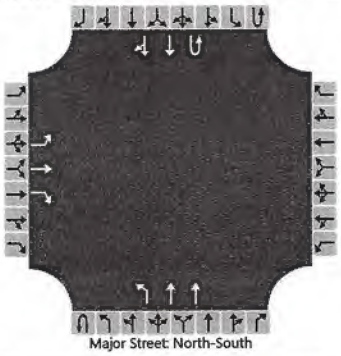
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	7/14/25
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Existing+Approved Projects+Millenium Estates

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L	T	R						L	T		U		T	TR
Volume (veh/h)		93	1	67					0	23	175		29		312	41
Percent Heavy Vehicles (%)		3	3	3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1			6.4			
Critical Headway (sec)		7.56	6.56	6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		101	1	73						25			32			
Capacity, c (veh/h)		394	369	814						1164			1081			
v/c Ratio		0.26	0.00	0.09						0.02			0.03			
95% Queue Length, Q_{95} (veh)		1.0	0.0	0.3						0.1			0.1			
95% Queue Length, Q_{95} (ft)		25.6	0.0	7.7						2.6			2.6			
Control Delay (s/veh)		17.3	14.8	9.9						8.2			8.4			
Level of Service (LOS)		C	B	A						A			A			
Approach Delay (s/veh)		14.2								0.9				0.6		
Approach LOS		B								A				A		

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HCS Two-Way Stop-Control Report

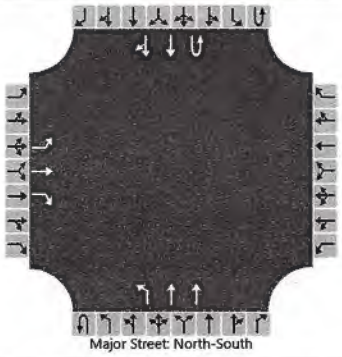
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	7/14/25
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Existing+Approved Projects+Millenium Estates

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L	T	R						L	T		U		T	TR
Volume (veh/h)		61	0	43					0	72	359		17		297	112
Percent Heavy Vehicles (%)		3	3	3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9						4.1			6.4			
Critical Headway (sec)		7.56	6.56	6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66	0	47						78			18			
Capacity, c (veh/h)		267	233	778						1105			808			
v/c Ratio		0.25	0.00	0.06						0.07			0.02			
95% Queue Length, Q_{95} (veh)		1.0	0.0	0.2						0.2			0.1			
95% Queue Length, Q_{95} (ft)		25.6	0.0	5.1						5.1			2.6			
Control Delay (s/veh)		22.9	20.4	9.9						8.5			9.6			
Level of Service (LOS)		C	C	A						A			A			
Approach Delay (s/veh)		17.5								1.4				0.4		
Approach LOS		C								A				A		

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Traffic Evaluation

for the Millenium Estates Project

Hanford, California

DRAFT REPORT

May 2025



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TABLE OF CONTENTS

Page

CHAPTERS

CHAPTER 1 – INTRODUCTION……..……1

CHAPTER 2 – EXISTING CONDITONS ……..…8

CHAPTER 3 – PROJECT DESCRIPTION……..…13

CHAPTER 4 – CONDITIONS WITH THE PROJECT……..……17

APPENDISES

APPENDIX A – EXISTING CONDITONS – LEVEL OF SERVICE CALCULATIONS ……..……21

APPENDIX B – EXISTING PLUS MILLENIUM ESTATES PROJECT CONDITONS – LEVEL OF SERVICE CALCULATIONS ……..……..…22

Traffic Evaluation

for the Millenium Estates Project

CHAPTER 1 – INTRODUCTION

Study Purpose
The Millenium Estates Project is located in Hanford, California. The project occupies approximately 30 acres and is located at the intersection of Millenium Way and 12 ½ Avenue. This intersection is currently under construction as part of another project. **Figure 1** shows a vicinity map of the area around the development site, while **Figure 9** shows the Millenium Estates site plan. This report evaluates the potential short-term changes in traffic with the addition of the proposed project. Based on discussions with the City of Hanford Staff, the following intersections and scenarios were analyzed.

Intersections
The study shall assess the following intersections:
1) 12 ½ Avenue at Millenium Way (future)
2)
3) Centennial Drive at Millenium Way
4) Centennial Drive at Lacey Blvd (signalized)
5) Centennial Drive/Mall Drive at 12th Avenue (signalized)

Scenarios
The study will include the following scenarios:
1) Existing Conditions
2) Existing plus the Millenium Estates Project
3) Existing plus the Millenium Estates Project (mitigated, if necessary)

Analysis Methodology
Existing peak hour turn counts (AM and PM) will be collected for the existing study intersections. Based on the data collected, an existing conditions analysis will be prepared using the existing counts and lane configurations and intersection control. The study intersections will be analyzed using the *Highway Capacity Manual* methodologies. Signal warrants (peak hour only) will be prepared using the methodologies from the *California Manual on Uniform Traffic Control Devices (MUTCD) for Street and Highways*. Peak hour signal warrants at all study intersections will be prepared as appropriate.

All level of service analyses performed for this study conform to the practices of the *Highway Capacity Manual*, and were done using the traffic analysis software HCS (unsignalized and

(signalized). For signalized intersections, this software allows for optimization of signal timings to minimize traffic delay at each intersection. This process can result in different signal cycle lengths for both the AM and PM peak hours of a given analysis scenario and may also vary between different scenarios. This optimization somewhat reflects traffic agency procedure whereby intersection signal cycle lengths are adjusted for differing traffic conditions and times, based on counts of existing traffic volume.

For analysis purposes, HCM defines six levels of service for various facility types. The six levels are given letter designations ranging from "A" to "F", with "A" representing the best operating conditions and "F" the worst. Quantifiable measures of effectiveness that best describe the quality of operation on the subject facility type are used to determine the facilities level of service. For the case of both signalized and unsignalized intersections, the quantifiable measure of effectiveness is average control delay.[1]

Control delay for two-way stop-controlled (TWSC) intersections, which have stop signs on only the minor street approaches, is on a per-vehicle basis and is computed for the stop-controlled, minor-street movements and major street left turn movements only, because major-street through movements are theoretically in continual free-flow conditions and therefore experience no delay. Since there is no aggregation of delay for a TWSC intersection, there is no level of service for an intersection as a whole, but only levels of service for individual minor-street and major-street left turn movements.

The following table shows level of service ratings and their corresponding ranges of average control delay for both signalized and unsignalized intersections. For signalized intersections, it also contains a general description of traffic flow associated with each level of service.

Level of service for each study intersection in the various analysis scenarios are summarized in tables throughout the report. For signalized intersections, the level of service rating shown represents the overall level of service for the intersection as a whole. For stop-controlled intersections, the level of service rating shown is for each individual traffic movement (excluding major-street through movements) instead of the entire intersection.

Level of Service Standard
The City of Hanford's Policy T29 set's the maximum Level of Service at "E" on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. The City has set a peak hour Level of Service of "D" on all other streets and intersections with the Planned Growth Boundary. For this study the Level of Service of "D" standard will be applicable.

[1] Control delay, according to the *2010 Highway Capacity Manual*, page 16-1, includes initial acceleration delay, queue move-up time, stopped delay, and final acceleration delay.

INTERSECTION LEVEL OF SERVICE DESCRIPTIONS			Allowable Delay	
			Signalized	Unsignalized [1]
Level of Service	**Conditions**	**Signalized Intersection Description**	**Delay (sec/veh)**	**Delay (sec/veh)**
"A"	Free Flow	*Users experience very low delay. Progression is favorable and most vehicles do not stop at all.*	≤10.0	≤10.0
"B"	Stable Operations	*Vehicles travel with good progression. Some vehicles stop, causing slight delay.*	>10.0 – 20.0	>10.0 – 15.0
"C"	Stable Operations	*Higher delays result from fair progression. A significant number of vehicles stop, although many continue to pass through the intersection without stopping.*	>20.0 to 35.0	>15.0 – 25.0
"D"	Approaching Unstable	*Congestion is noticeable. Progression is unfavorable, with more vehicles stopping rather than passing through the intersection.*	>35.0 – 55.0	>25.0 – 35.0
"E"	Unstable Operations	*Traffic volumes are at capacity. Users experience poor progression and long delays.*	>55.0 – 80.0	>35.0 – 50.0
"F"	Forced Flow	*Intersection's capacity is oversaturated, causing poor progression and unusually long delays.*	>80.0	>50.0

Source: Chapters 16 and 18, Highway Capacity Manual, Transportation Research Board.
[1]Unsignalizedintersections include TWSC and AWSC

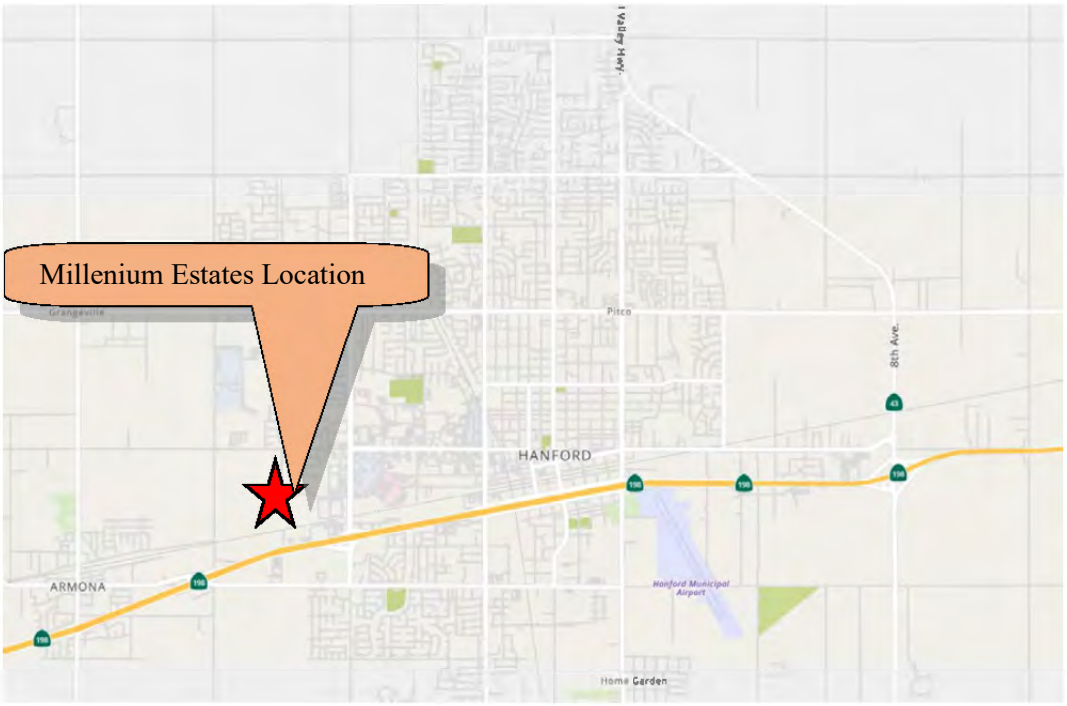


FIGURE 1: Vicinity Map



FIGURE 2: Project Location

Transit Service
Kings Area Regional Transit (KART) operates bus service throughout Kings County and surrounding counties. This service includes both fixed route and demand response services. Within Hanford KART operates eight routes as well as seven intercity routes to and from Hanford. Service generally operates Monday- Friday and every hour on Saturday. Local fares are $1.25 one-way and regional fares are $1.75 one-way.

A number of routes provide transit service in the area of the Millenium Estates Project. Route 6 (Figure 3) operates along Centennial Drive near Millenium Way, which is approximately 1,000 feet east of the Project site. Route 7 (Figure 4) operates along Lacey Boulevard at its intersection with Centennial Drive, which is approximately ½ mile north of the Project site. Route 9 (Figure 5) operates on Lacey (approximately 1,800 feet north of the Project) and Centennial (approximately 1,000 feet west of the Project. Route 12 (Figure 6) operates on operates along Centennial Drive near Millenium Way, which is approximately 1,000 feet east of the Project site. Route 14 (Figure 7) operates on Lacey (approximately 1,800 feet north of the Project).

Service on these routes is provided Monday through Friday from 6:30 AM to 7:30 PM and on Saturday from 9:30 AM to 4:30 PM. Service is provided at 30-minute headways. Transfers can be made to other routes at the Transit Center located in Downtown Hanford.

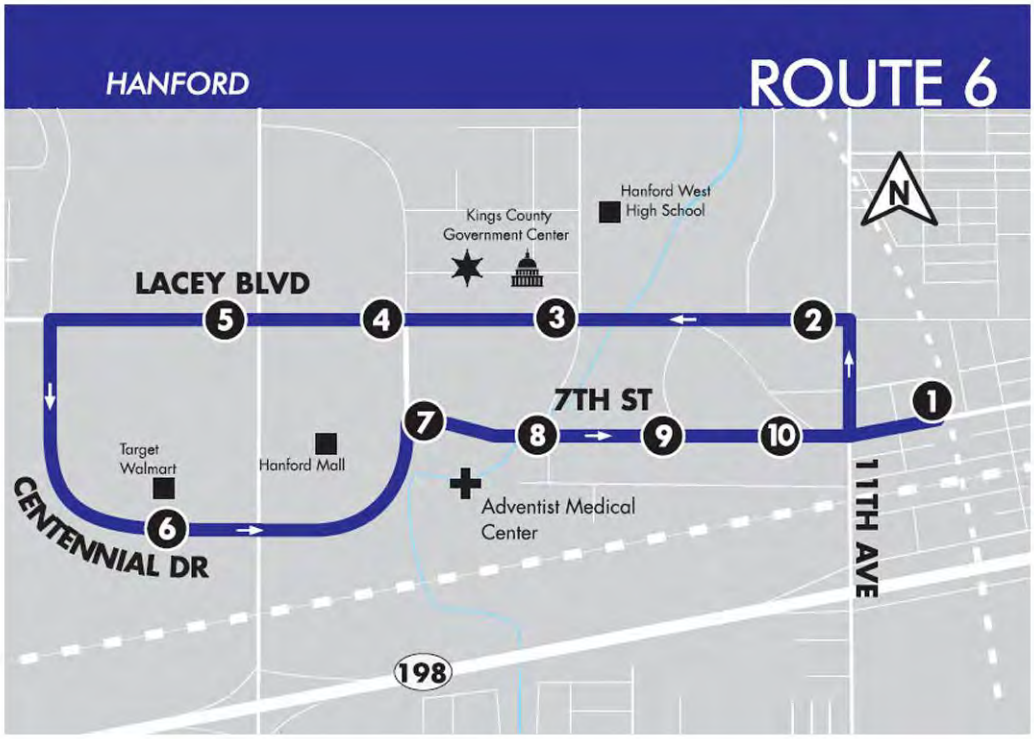


FIGURE 3: Route 6 Service



FIGURE 4: Route 7 Service



FIGURE 5: Route 9 Service



FIGURE 6: Route 12 – Avenal Service



FIGURE 7: Route 14 – Hanford-Laton Service

CHAPTER 2 –EXISTING CONDITIONS

Roadways

Lacey Boulevard

This street is generally a four-lane street east of 12 ½ Avenue with traffic signals at the intersections of Centennial Drive and 12th Avenue. The street is designated as an Arterial in the City General Plan and is currently posted as a 40 mile per hour speed zone.

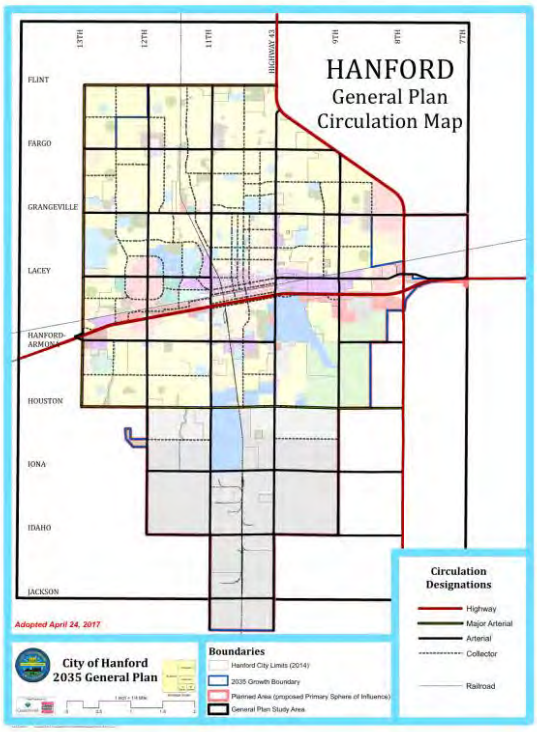
12th Avenue

The street is a four-lane divided city street with traffic signals at the intersections of Lacey Blvd and at Centennial Drive. The street is designated as an Arterial in the City General Plan and is currently posted as a 40 mile per hour speed zone.

12 ½ Avenue

Centennial Drive

Is a four-lane divided city street which runs between Lacey Boulevard and 12th Avenue with a traffic signals at the intersections of Lacey and 12th. The street is designated as a collector street in the City's General Plan. The street is currently posted as a 35 mile per hour speed zone.



Millenium Way

Is currently under construction from 12 ½ Avenue to Centennial Drive. It is assumed that this street will ultimately be constructed to a two-lane city street with left turn pockets at the intersections of 12 ½ Avenue and 12 Avenue. For analysis purposes it has been assumed for an eastbound stop sign will be installed on Millenium at 12th Avenue and stops signs will be placed on 12 ½ Avenue. The street is designated as a collector street in the City's General Plan. The future speed limit for this street is unknown at this time.

Traffic Counts

According to the Institute of Transportation Engineers' *Traffic Impact Analyses for Site Development*, the overall purpose of a traffic impact study is to determine the project impacts that are likely to occur to the surrounding street system. In order to accomplish this, analysts need to determine what occurs when the peak of the project generated traffic is combined with the peak of the surrounding street traffic. The publication states that "peak

periods [of adjacent streets and highways] are generally the weekday morning (7-9 a.m.) and evening (4-6 p.m.) peak hours, although local area characteristics occasionally result in other peaks (e.g., at major shopping or recreational centers).

On April 23, 2025, National Data & Surveying Services completed traffic counts between 7am and 9am and 4pm and 6pm at the designated intersections. That traffic data suggested that the peak hours were generally from 8:00 to 9:00am and from 5:45 to 6:45pm. The existing AM and PM traffic counts at the study intersection are shown in **Figure 8**.

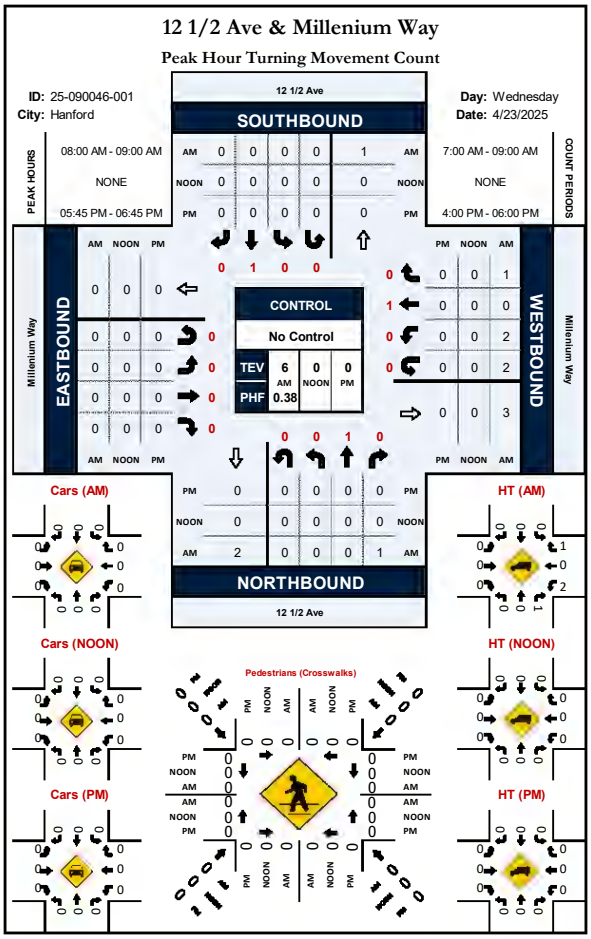
Existing Conditions (2025)

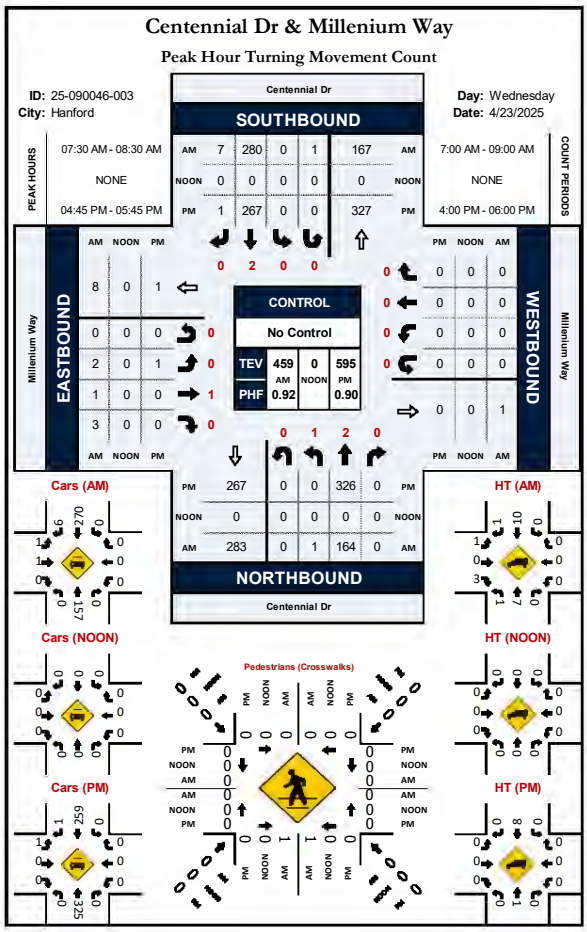
Existing levels of service at the study intersections were assessed using the current lane configurations and using the existing weekday peak hour traffic volumes (shown in **Figure 8**). Level of service for existing conditions is summarized in **Table 1**. Calculations for the existing conditions are included in **Appendix A.** Also, given the current construction at the intersections of 12 ½ at Millenium and Centennial at Millenium, no evaluation of the existing conditions were completed at these locations. Additionally, for assessment purposes, the intersection of 12 ½ at Lacey is assumed to have northbound and southbound stop signs. The intersection is currently un-controlled, but this assumption will allow for the evaluation of the existing and existing plus project northbound movements.

Based on the existing conditions assessment, all five intersections are currently operating above the City of Hanford's level of service standard of "D". Of note is the intersection of Centennial at 12th, which is operating at LOS D in the PM peak hour. This is due primarily to the high volume of westbound lefts.

Table 1:
Existing Conditions
Level of Service

Intersection	AM Peak Hour		PM Peak Hour	
	Vehicle Delay	LOS	Vehicle Delay	LOS
12 ½ Ave at Millenium Way	n/a	n/a	n/a	n/a
12 ½ Ave at Lacey Blvd				
Westbound	0.2	A	0.4	A
Eastbound	0.0	A	0.0	A
Northbound (w/stop sign)	12.3	B	12.2	B
Centennial Dr at Millenium	n/a	n/a	n/a	n/a
Centennial at Lacey (signal)	17.2	B	19.3	B
Centennial at 12th (signal)	24.0	C	38.7	D


12 1/2 Ave & Millenium Way
Peak Hour Turning Movement Count
ID: 25-090046-001
City: Hanford
Day: Wednesday
Date: 4/23/2025
12 1/2 Ave
SOUTHBOUND
PEAK HOURS
08:00 AM - 09:00 AM
NONE
05:45 PM - 06:45 PM
7:00 AM - 09:00 AM
NONE
4:00 PM - 06:00 PM
COUNT PERIODS
EASTBOUND
WESTBOUND
Millenium Way
CONTROL
No Control
TEV 6 0 0
PHF 0.38
NORTHBOUND
12 1/2 Ave
Cars (AM)
HT (AM)
Cars (NOON)
HT (NOON)
Cars (PM)
HT (PM)
Pedestrians (Crosswalks)



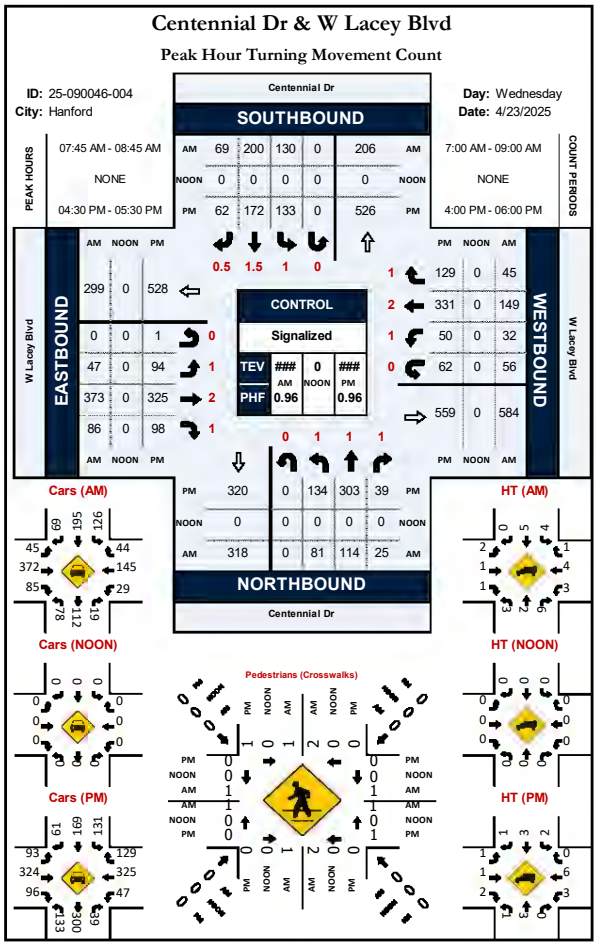


FIGURE 8: Existing Traffic Counts

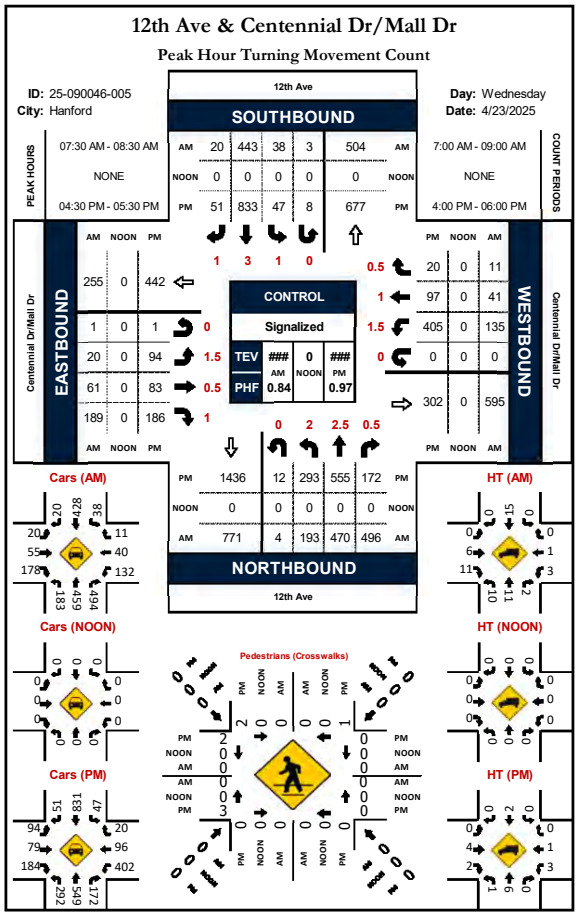


FIGURE 8: Existing Traffic Counts

CHAPTER 3 – PROJECT DESCRIPTION

. **Figure 9** shows the proposed site plan.

Project Trip Generation

New trips generated by the Millenium Estates Project were estimated using the Institute of Transportation Engineer's *Trip Generation Manual.* This publication provides average rates of trip generation for different land uses and relates these to dwelling units (residential) and square footages (fast food and retail shops). Trip generation rates are provided for weekdays along with the proportion of trips that are inbound or outbound from the development. The resulting Project trip generation is shown in **Table 2**. The estimated Project's vehicle trips yield 147 trips in the AM peak hour and 200 trips in the PM peak hour. The Project is estimated to generate a total of 2,006 daily trips.

Table 2
Millenium Estates Project
Trip Genreation

Land Use	Units	Land Use Code	Daily Trips	AM Peak Hour Trips		PM Peak Hour Trips	
				Enter	Exit	Enter	Exit
Single family	211	210	2,006	37	110	126	74
Totals	**211**		**2,006**	**37**	**110**	**126**	**74**

Project Trip Distribution

The Project distribution was developed from existing volumes of traffic surrounding the site. These percentages were used to distribute project trips to the study intersections.. **Table 3** shows the trip distribution for both AM and PM peak hour trips to and from the Millenium Estates Project.

Table 3
Millenium Estates Project
Trip Distribution (percentage)

Peak Hour	AM		PM	
Direction	In	Out	In	Out
North	25%	25%	25%	25%
South (via 12th Ave)	30%	30%	30%	30%
East	30%	30%	30%	30%
West (via Lacey)	15%	15%	15%	15%
	100%	100%	100%	100%

Project Trip Assignment

The specific project trip assignments at the intersections are shown in **Figure 10.** The assignments have been completed to reflect existing traffic volumes at the surrounding intersections and consideration of the Millenium Estates trip generation profile.

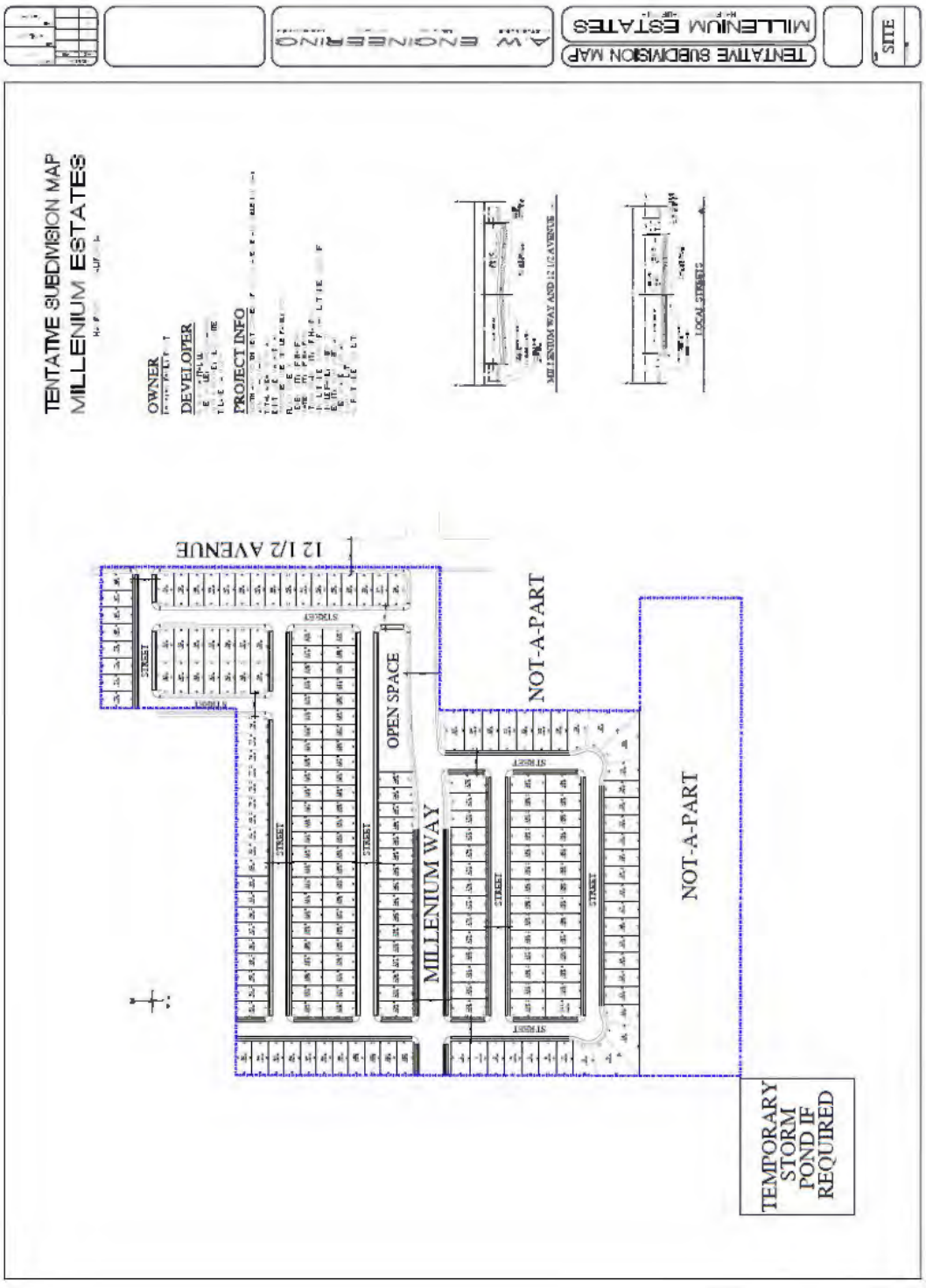
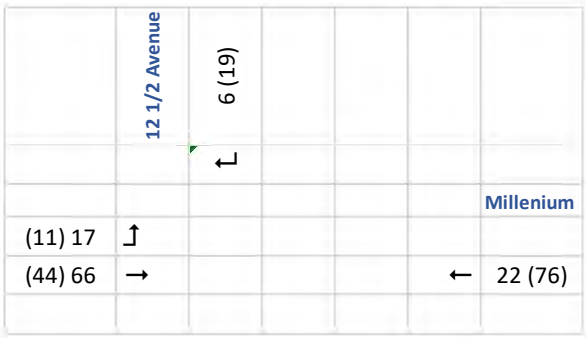
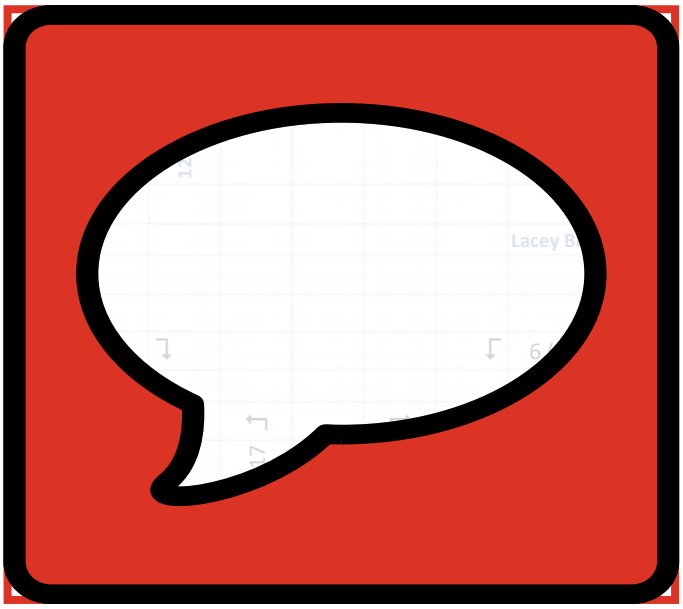
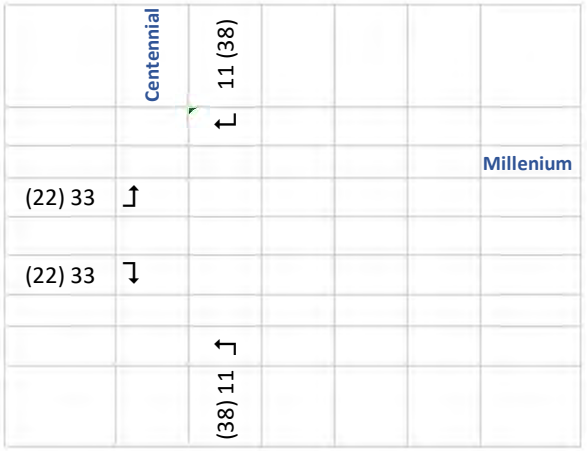


FIGURE 9: Millenium Estates Project



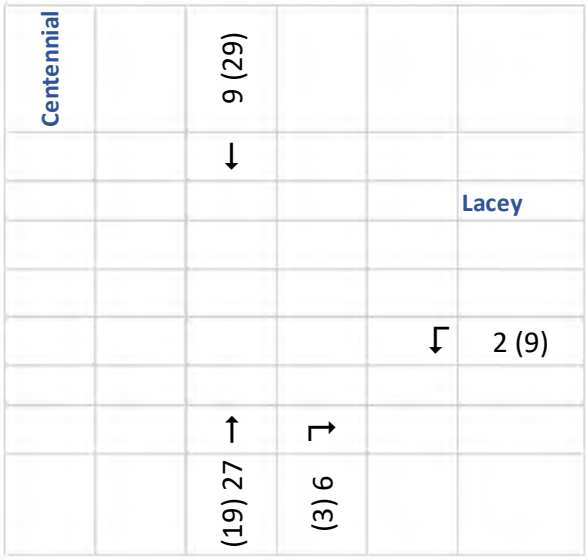
12 ½ Avenue at Millenium Way



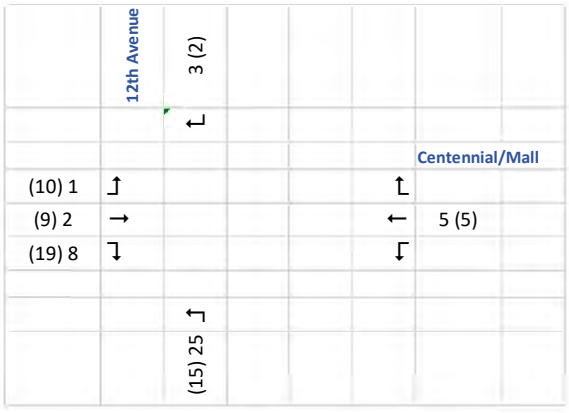


Centennial Drive at Millenium Way

FIGURE 10: Project Trip Assignment at Study Intersections



Centennial Drive at Lacey Blvd



Centennial Drive at 12th Avenue

FIGURE 10: Project Trip Assignment at Study Intersections

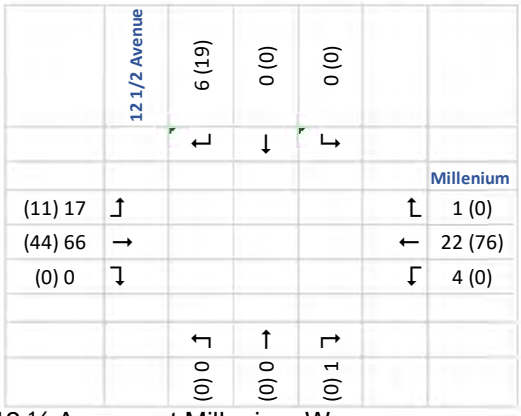
CHAPTER 4 – EXISTING CONDITIONS PLUS PROJECT

The conditions with trips generated from the Millenium Estates Project were assessed by adding the Project's net new trips to the existing traffic volumes which were shown in **Figure 8**. The Project's trip assignment is shown in **Figure 10**, which were added to the existing volumes to estimate the existing plus Project volumes. The combined peak hour traffic volumes used for this assessment are shown in **Figure 11**. The lane configurations at the intersection with the completion of the Millenium Estates Project were assumed to remain the same as existing with the exception of the Millenium at 12½ Avenue intersection. At this intersection the western leg was assumed to be partially constructed as part of the Millenium Estates Project. This For assessment purposes it is assumed that each leg of this intersection will have a separate left turn lane and a thru/right lane.

Table 4:
Existing Conditions PLUS Millenium Estates Project
Level of Service

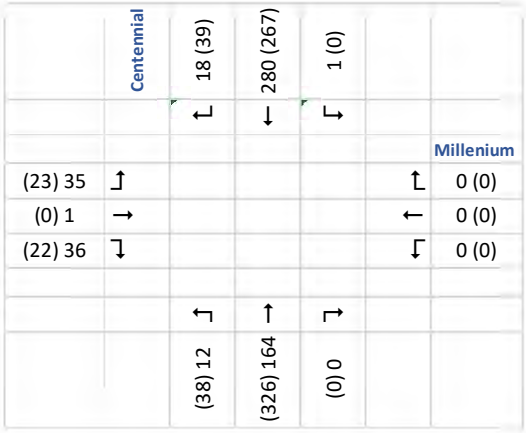
Intersection	AM Peak Hour		PM Peak Hour	
	Vehicle Delay	LOS	Vehicle Delay	LOS
12 ½ Ave at Millenium Way				
Eastbound	1.5	A	1.5	A
Westbound	1.1	A	0.0	A
Northbound	8.6	A	0.0	A
Southbound	8.5	A	8.8	A
Centennial Dr at Millenium				
Eastbound	10.8	A	11.6	B
Northbound	0.5	A	0.8	A
Southbound	0.0	A	0.0	A
Centennial at Lacey (signal)	17.4	B	20.1	C
Centennial at 12th (signal)	24.2	C	41.7	D

The Level of Service Calculations for the Existing plus the Project can be seen in **Appendix B.** Based on the Existing plus Millenium Estates Project conditions assessment as shown in **Table 4**, the intersections are projected to operate above the City's level of service target standard of D. Of note is the intersection of Centennial at 12th, which is operating at LOS D in the PM peak hour. This is due primarily to the existing high volume of westbound lefts.



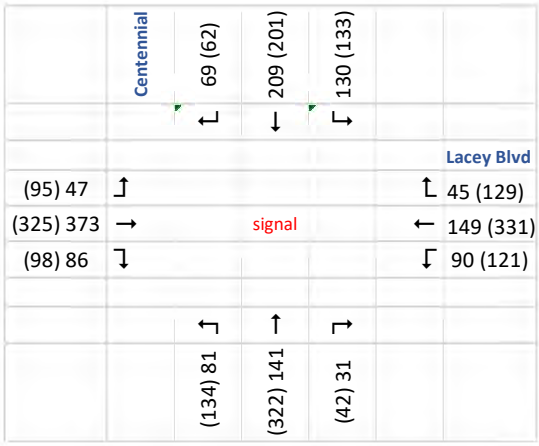
12 ½ Avenue at Millenium Way



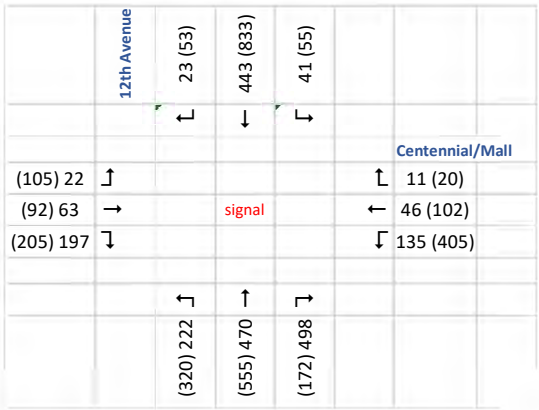


Centennial Drive at Millenium Way

FIGURE 11: Existing Plus Millenium Estates Traffic Counts



Centennial Drive at Lacey Blvd



Centennial Drive at 12th Avenue

FIGURE 11: Existing Plus Millenium Estates Traffic Counts

Payment of City Impact Fee

The Millenium Estates Project will contribute to the overall circulation system through the payment of the City's Traffic Impact Fee. This fee will be used to fund and construct street improvements throughout the City Based on the current fee structure the Millenium Estates Project is estimated to contribute approximately $843,000 to this City fund (**Table 5**). This is an estimate based on the site plan shown in **Figure 9**.

Table 5
Millenium Estates Project
Traffic Impact Fee

Land Use		Units	Rate	Fee
Residential	Single family	211	$ 3,995.72	$ 843,096.92

Suggestions for City Consideration

As part of the review of Planned Unit Development No. 2018-01 and the Millenium Estates projects, it is suggested that the City:

1) Review the lane configuration at the intersection of Centennial at Millenium with the suggestion to include separate eastbound left and right turn lanes. Included in this suggestion is the opening of the left turn pockets on Centennial Drive.
2) Consider the introduction of separate left turn lanes and a thru/right lane on each approach leg of the intersection of Millenium at 12 ½ Avenue.
3) Review potential for stop control for the intersections of Lacey Blvd. at 12 ½ Avenue, Millenium at 12 ½ Avenue and Centennial at Millenium.

Appendix A
Existing Conditions
Level of Service Calculations

HCS Two-Way Stop-Control Report

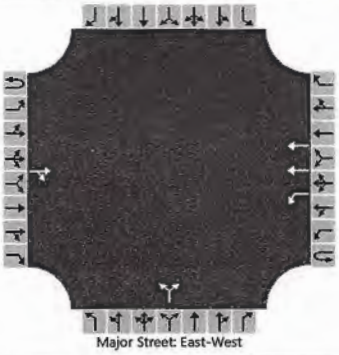
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/21/2025
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	12 1/2 at Lacey
Jurisdiction	Hanford
East/West Street	Lacey Blvd
North/South Street	12 1/2 Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	2	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			507	1		6	297			2		2				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						6					4					
Capacity, c (veh/h)						1012					496					
v/c Ratio						0.01					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
95% Queue Length, Q_{95} (ft)						0.0					0.0					
Control Delay (s/veh)						8.6					12.3					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.2				12.3							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

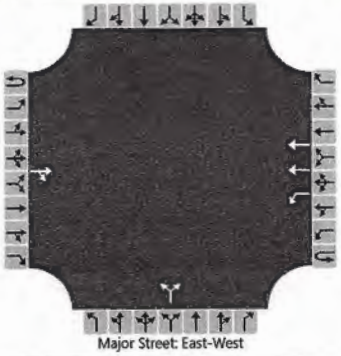
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/21/2025
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	12 1/2 at Lacey
Jurisdiction	Hanford
East/West Street	Lacey Blvd
North/South Street	12 1/2 Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	2	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			504	0		15	512			1		4				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

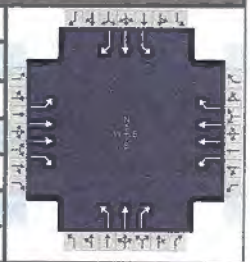
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						16					5					
Capacity, c (veh/h)						1016					508					
v/c Ratio						0.02					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
95% Queue Length, Q_{95} (ft)						0.0					0.0					
Control Delay (s/veh)						8.6	0.1				12.2					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					0.4				12.2							
Approach LOS					A				B							

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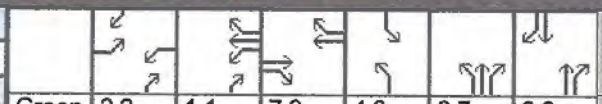
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	0.250
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	0.96
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	Centennial at Lacey	File Name	Centennial at Lacey Existing AM.xus		
Project Description	Existing AM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	373	86	88	149	45	81	114	25	130	200	69

Signal Information			
Cycle, s	43.1	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.2	1.1	7.9	4.3	0.7	6.9						
Yellow	4.0	0.0	4.0	4.0	0.0	4.0						
Red	1.0	0.0	1.0	1.0	0.0	1.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.2	12.9	8.3	14.0	10.0	12.6	9.3	11.9
Change Period, (*Y+R c*), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (*g s*), s	3.2	6.4	4.2	3.6	3.9	4.4	5.2	6.6
Green Extension Time (*g e*), s	0.0	1.5	0.1	1.5	0.1	0.6	0.1	0.3
Phase Call Probability	0.44	1.00	0.67	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.01	0.14	0.80

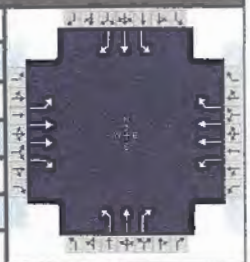
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	49	389	81	92	155	42	84	119	23	135	208	65
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1766	1541	1767	1766	1541	1767	1856	1541	1767	1856	1541
Queue Service Time (*g s*), s	1.2	4.4	2.0	2.2	1.6	0.9	1.9	2.4	0.5	3.2	4.6	1.5
Cycle Queue Clearance Time (*g c*), s	1.2	4.4	2.0	2.2	1.6	0.9	1.9	2.4	0.5	3.2	4.6	1.5
Green Ratio (*g/C*)	0.05	0.18	0.18	0.08	0.21	0.21	0.12	0.18	0.25	0.10	0.16	0.21
Capacity (*c*), veh/h	91	646	282	137	738	322	205	328	392	175	297	327
Volume-to-Capacity Ratio (*X*)	0.536	0.601	0.288	0.669	0.210	0.130	0.412	0.362	0.058	0.772	0.701	0.198
Back of Queue (*Q*), ft/ln (95 th percentile)	21	68	27	39	24	13	32	41	6	58	80	20
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	2.7	1.1	1.5	0.9	0.5	1.2	1.6	0.2	2.3	3.1	0.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.14	0.14	0.05	0.26	0.05	0.03	0.16	0.08	0.01	0.58	0.16	0.04
Uniform Delay (*d 1*), s/veh	20.0	16.2	15.2	19.4	14.1	13.9	17.7	15.6	12.2	19.0	17.1	14.0
Incremental Delay (*d 2*), s/veh	1.8	0.3	0.2	2.1	0.1	0.1	0.5	0.2	0.0	2.7	1.1	0.1
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	21.8	16.5	15.4	21.5	14.2	14.0	18.2	15.9	12.2	21.7	18.3	14.1
Level of Service (LOS)	C	B	B	C	B	B	B	B	B	C	B	B
Approach Delay, s/veh / LOS	16.8	B		16.5	B		16.4	B		18.7	B	
Intersection Delay, s/veh / LOS	17.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	2.42	B	2.43	B
Bicycle LOS Score / LOS	0.92	A	0.73	A	0.86	A	1.16	A

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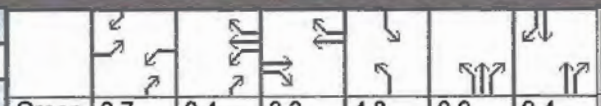
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	0.250
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	0.96
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	Centennial at Lacey	File Name	Centennial at Lacey Existing PM.xus		
Project Description	Existing PM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	95	325	98	112	331	129	134	303	39	133	172	62

Signal Information			
Cycle, s	47.6	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.7	0.4	8.3	4.8	0.9	9.4	
Yellow	4.0	0.0	4.0	4.0	0.0	4.0	
Red	1.0	0.0	1.0	1.0	0.0	1.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.7	13.3	9.1	13.8	10.8	15.3	9.8	14.4
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s	4.6	6.2	5.1	6.2	5.6	9.7	5.6	6.1
Green Extension Time (g_e), s	0.1	2.1	0.1	2.1	0.1	0.7	0.1	0.5
Phase Call Probability	0.73	1.00	0.79	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.29	0.23	0.63

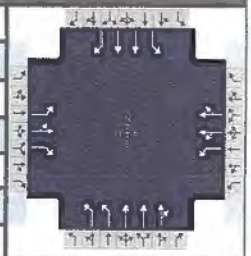
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	99	339	94	117	345	129	140	316	38	139	179	57
Adjusted Saturation Flow Rate (s), veh/h/ln	1767	1766	1541	1767	1766	1541	1767	1856	1541	1767	1856	1541
Queue Service Time (g_s), s	2.6	4.2	2.6	3.1	4.2	3.6	3.6	7.7	0.8	3.6	4.1	1.3
Cycle Queue Clearance Time (g_c), s	2.6	4.2	2.6	3.1	4.2	3.6	3.6	7.7	0.8	3.6	4.1	1.3
Green Ratio (g/C)	0.08	0.17	0.17	0.09	0.18	0.18	0.12	0.22	0.30	0.10	0.20	0.28
Capacity (c), veh/h	136	617	269	153	651	284	214	404	469	180	368	424
Volume-to-Capacity Ratio (X)	0.727	0.549	0.349	0.761	0.530	0.455	0.652	0.782	0.080	0.769	0.487	0.135
Back of Queue (Q), ft/ln (95 th percentile)	49	68	37	57	69	52	63	140	11	67	70	18
Back of Queue (Q), veh/ln (95 th percentile)	1.9	2.7	1.4	2.2	2.7	2.0	2.5	5.5	0.4	2.6	2.7	0.7
Queue Storage Ratio (RQ) (95 th percentile)	0.33	0.14	0.07	0.38	0.14	0.10	0.32	0.28	0.02	0.67	0.14	0.04
Uniform Delay (d_1), s/veh	21.5	18.0	17.3	21.3	17.6	17.3	20.0	17.6	11.8	20.9	17.0	13.0
Incremental Delay (d_2), s/veh	2.8	0.3	0.3	2.9	0.2	0.4	1.3	2.4	0.0	2.6	0.4	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.3	18.3	17.6	24.2	17.8	17.8	21.3	20.0	11.9	23.5	17.3	13.1
Level of Service (LOS)	C	B	B	C	B	B	C	C	B	C	B	B
Approach Delay, s/veh / LOS	19.3	B		19.1	B		19.8	B		19.0	B	
Intersection Delay, s/veh / LOS	19.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.11	B	2.42	B	2.43	B
Bicycle LOS Score / LOS	0.93	A	0.97	A	1.30	A	1.11	A

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HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	1.000
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	1.00
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	12th Avenue at Centenn...	File Name	12 at Centennial Existing AM.xus		
Project Description	Existing AM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	21	61	189	135	41	11	197	470	496	41	443	20

Signal Information			
Cycle, s	68.7	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	4.3		18.9	10.0	10.0	0.0					
Yellow	4.0	0.0		4.0	4.0	4.0	0.0					
Red	1.0	0.0		1.0	1.0	1.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		9.0		10.0	2.0	4.0	2.0	3.0
Phase Duration, s		15.0		15.0	14.8	28.2	10.4	23.9
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s		3.3		3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		9.3		6.9	5.6	20.5	3.5	9.1
Green Extension Time (g_e), s		0.4		0.3	0.2	2.7	0.0	3.4
Phase Call Probability		1.00		1.00	0.98	1.00	0.54	1.00
Max Out Probability		0.00		0.00	0.23	0.20	0.00	0.01

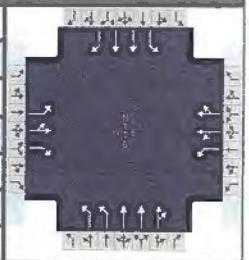
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	21	61	170	135	26	25	197	470	446	41	443	20
Adjusted Saturation Flow Rate (s), veh/h/ln	1767	1856	1541	1767	1856	1697	1716	1856	1541	1767	1766	1541
Queue Service Time (g_s), s	0.7	2.0	7.3	4.9	0.8	0.9	3.6	6.6	18.5	1.5	7.1	0.7
Cycle Queue Clearance Time (g_c), s	0.7	2.0	7.3	4.9	0.6	0.9	3.6	6.6	18.5	1.5	7.1	0.7
Green Ratio (g/C)	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.34	0.34	0.08	0.28	0.28
Capacity (c), veh/h	257	270	224	257	270	247	488	1256	522	140	973	424
Volume-to-Capacity Ratio (X)	0.082	0.226	0.758	0.525	0.096	0.102	0.404	0.374	0.855	0.293	0.455	0.047
Back of Queue (Q), ft/ln (95 th percentile)	13	39	122	91	16	15	64	118	285	29	126	10
Back of Queue (Q), veh/ln (95 th percentile)	0.5	1.5	4.8	3.5	0.6	0.6	2.5	4.6	11.4	1.1	4.9	0.4
Queue Storage Ratio (RQ) (95 th percentile)	0.05	0.08	0.24	0.40	0.03	0.03	0.26	0.24	0.58	0.16	0.25	0.02
Uniform Delay (d_1), s/veh	25.4	25.9	28.2	27.1	25.4	25.4	26.8	17.2	21.2	29.8	20.6	18.3
Incremental Delay (d_2), s/veh	0.0	0.2	2.0	0.6	0.1	0.1	0.2	0.1	7.5	0.4	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.4	26.1	30.2	27.6	25.5	25.5	27.0	17.3	28.7	30.2	20.7	18.3
Level of Service (LOS)	C	C	C	C	C	C	C	B	C	C	C	B
Approach Delay, s/veh / LOS	28.8	C		27.1	C		23.6	C		21.4	C	
Intersection Delay, s/veh / LOS	24.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.65	C	2.59	C	2.10	B	2.30	B
Bicycle LOS Score / LOS	0.90	A	0.64	A	1.10	A	0.90	A

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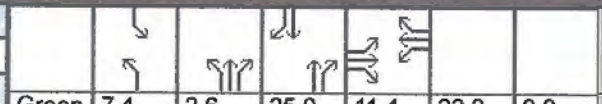
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	1.000
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	1.00
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	12th Avenue at Centenn...	File Name	12 at Centennial Existing PM.xus		
Project Description	Existing PM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	95	83	186	405	97	20	305	555	172	55	833	51

Signal Information			
Cycle, s	88.7	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.4	2.6		25.0	11.4	22.2	0.0					
Yellow	4.0	0.0		4.0	4.0	4.0	0.0					
Red	1.0	0.0		1.0	1.0	1.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		9.0		10.0	2.0	4.0	2.0	3.0
Phase Duration, s		16.4		27.2	15.0	32.6	12.4	30.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		3.2		3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		11.4		21.8	9.7	11.0	4.6	21.6
Green Extension Time (g_e), s		0.1		0.4	0.4	3.6	0.0	1.6
Phase Call Probability		1.00		1.00	1.00	1.00	0.74	1.00
Max Out Probability		1.00		0.93	0.13	0.08	0.00	0.93

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	95	83	167	405	59	57	305	465	212	55	833	51
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1541	1767	1856	1716	1716	1856	1648	1767	1766	1541
Queue Service Time (g_s), s	4.4	3.6	9.4	19.8	2.2	2.3	7.7	8.7	9.0	2.6	19.6	2.2
Cycle Queue Clearance Time (g_c), s	4.4	3.6	9.4	19.8	2.2	2.3	7.7	8.7	9.0	2.6	19.6	2.2
Green Ratio (*g/C*)	0.13	0.13	0.13	0.25	0.25	0.25	0.11	0.31	0.31	0.08	0.28	0.28
Capacity (*c*), veh/h	228	240	199	442	464	429	388	1156	513	148	996	434
Volume-to-Capacity Ratio (*X*)	0.416	0.347	0.839	0.916	0.127	0.133	0.786	0.402	0.413	0.372	0.836	0.117
Back of Queue (*Q*), ft/ln (95 th percentile)	86	74	220	425	43	41	150	170	153	52	362	38
Back of Queue (*Q*), veh/ln (95 th percentile)	3.4	2.9	8.6	16.6	1.7	1.6	5.9	6.6	6.1	2.0	14.1	1.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.34	0.15	0.44	1.89	0.09	0.08	0.60	0.34	0.31	0.29	0.72	0.08
Uniform Delay (d_1), s/veh	35.5	35.2	37.7	32.3	25.7	25.8	38.3	24.0	24.1	38.4	29.9	23.6
Incremental Delay (d_2), s/veh	0.5	0.3	27.4	24.9	0.0	0.1	2.1	0.1	0.2	0.6	9.0	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	36.0	35.5	65.1	57.2	25.8	25.8	40.4	24.1	24.3	39.0	38.9	24.2
Level of Service (LOS)	D	D	E	E	C	C	D	C	C	D	D	C
Approach Delay, s/veh / LOS	50.0	D		50.2	D		29.2	C		38.1	D	
Intersection Delay, s/veh / LOS	38.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.65	C	2.60	C	2.11	B	2.31	B
Bicycle LOS Score / LOS	1.06	A	0.92	A	1.03	A	1.26	A

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Appendix B

Existing Plus Millenium Estates Project Conditions

Level of Service Calculations

HCS Two-Way Stop-Control Report

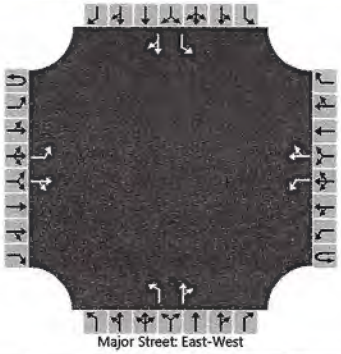
General Information

Analyst	CC
Agency/Co.	Visalia
Date Performed	5/28/2025
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Existing plus Project

Site Information

Intersection	12 1/2 Ave at Millenium Way
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	12 1/2
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		1	1	0
Configuration		L		TR		L		TR		L		TR		L		TR
Volume (veh/h)		17	66	0		4	22	1		0	0	1		0	0	6
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				4				0		1		0		7
Capacity, c (veh/h)		1583				1522				805		988		812		1049
v/c Ratio		0.01				0.00				0.00		0.00		0.00		0.01
95% Queue Length, Q_{95} (veh)		0.0				0.0				0.0		0.0		0.0		0.0
95% Queue Length, Q_{95} (ft)		0.0				0.0				0.0		0.0		0.0		0.0
Control Delay (s/veh)		7.3				7.4				9.5		8.6		9.4		8.5
Level of Service (LOS)		A				A				A		A		A		A
Approach Delay (s/veh)		1.5				1.1				8.6				8.5		
Approach LOS		A				A				A				A		

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HCS Two-Way Stop-Control Report

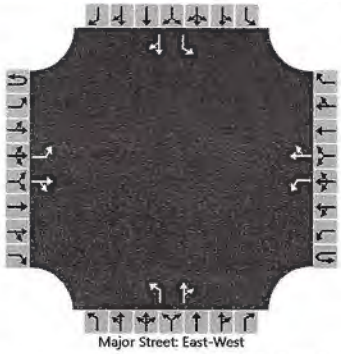
General Information

Analyst	CC
Agency/Co.	Visalia
Date Performed	5/28/2025
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing plus Project

Site Information

Intersection	12 1/2 Ave at Millenium Way
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	12 1/2
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		1	1	0
Configuration		L		TR		L		TR		L		TR		L		TR
Volume (veh/h)		11	44	0		0	76	0		0	0	0		0	0	19
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12				0				0		0		0		21
Capacity, c (veh/h)		1508				1553				775		0		804		974
v/c Ratio		0.01				0.00				0.00				0.00		0.02
95% Queue Length, Q_{95} (veh)		0.0				0.0				0.0				0.0		0.1
95% Queue Length, Q_{95} (ft)		0.0				0.0				0.0				0.0		2.6
Control Delay (s/veh)		7.4				7.3				9.6				9.5		8.8
Level of Service (LOS)		A				A				A				A		A
Approach Delay (s/veh)	1.5				0.0								8.8			
Approach LOS	A				A								A			

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HCS Two-Way Stop-Control Report

General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/21/2025
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Existing plus Project

Site Information

Intersection	12 1/2 at Lacey
Jurisdiction	Hanford
East/West Street	Lacey Blvd
North/South Street	12 1/2 Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	2	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			507	10		12	297			19		30				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						13					53					
Capacity, c (veh/h)						1004					499					
v/c Ratio						0.01					0.11					
95% Queue Length, Q_{95} (veh)						0.0					0.4					
95% Queue Length, Q_{95} (ft)						0.0					10.2					
Control Delay (s/veh)						8.6	0.1				13.1					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					0.4				13.1							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/21/2025
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing plus Project

Site Information

Intersection	12 1/2 at Lacey
Jurisdiction	Hanford
East/West Street	Lacey Blvd
North/South Street	12 1/2 Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	2	0		0	1	0		0	0	0
Configuration				TR		L	T				LR					
Volume (veh/h)			504	20		36	512			16		19				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				

HCS Two-Way Stop-Control Report

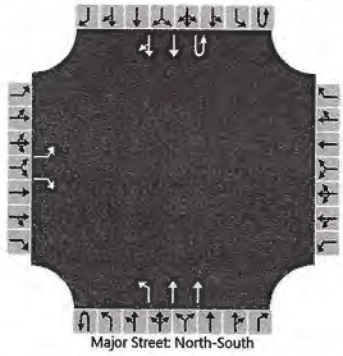
General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/28/2025
Analysis Year	2025
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Existing plus Project

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L		R						L	T		U		T	TR
Volume (veh/h)		35		36					0	12	164		1		280	18
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		38		39						13			1			
Capacity, c (veh/h)		543		851						1225			1099			
v/c Ratio		0.07		0.05						0.01			0.00			
95% Queue Length, Q_{95} (veh)		0.2		0.1						0.0			0.0			
95% Queue Length, Q_{95} (ft)		5.1		2.6						0.0			0.0			
Control Delay (s/veh)		12.1		9.4						8.0			8.3			
Level of Service (LOS)		B		A						A			A			
Approach Delay (s/veh)		10.8								0.5			0.0			
Approach LOS		B								A			A			

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HCS Two-Way Stop-Control Report

General Information

Analyst	CC
Agency/Co.	Hanford
Date Performed	5/28/2025
Analysis Year	2025
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Existing plus Project

Site Information

Intersection	Centennial at Millenium
Jurisdiction	Hanford
East/West Street	Millenium
North/South Street	Centennial
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	0
Configuration		L		R						L	T		U		T	TR
Volume (veh/h)		23		22					0	38	326		0		267	39
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		Yes														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

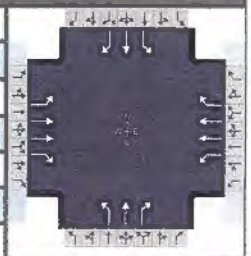
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		25		24						41			0			
Capacity, c (veh/h)		433		846						1216			851			
v/c Ratio		0.06		0.03						0.03			0.00			
95% Queue Length, Q_{95} (veh)		0.2		0.1						0.1			0.0			
95% Queue Length, Q_{95} (ft)		5.1		2.6						2.6			0.0			
Control Delay (s/veh)		13.8		9.4						8.1			9.2			
Level of Service (LOS)		B		A						A			A			
Approach Delay (s/veh)		11.6								0.8				0.0		
Approach LOS		B								A				A		

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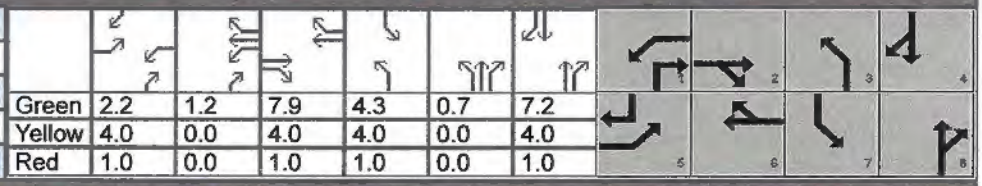
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	0.250
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	0.96
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	Centennial at Lacey	File Name	Centennial at Lacey Existing plus Project AM.xus		
Project Description	Existing plus Project AM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	373	86	90	149	45	81	141	31	130	209	69

Signal Information			
Cycle, s	43.5	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.2	1.2		7.9	4.3	0.7	7.2					
Yellow	4.0	0.0		4.0	4.0	0.0	4.0					
Red	1.0	0.0		1.0	1.0	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.2	12.9	8.4	14.1	10.0	12.9	9.3	12.2
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s	3.2	6.4	4.2	3.6	3.9	5.1	5.3	6.8
Green Extension Time (g_e), s	0.0	1.5	0.1	1.5	0.1	0.7	0.1	0.3
Phase Call Probability	0.45	1.00	0.68	1.00	1.00	1.00	1.00	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.01	0.15	0.95

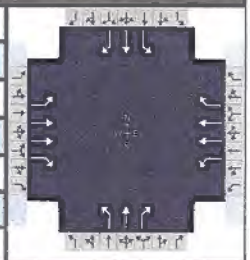
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	49	389	81	94	155	42	84	147	29	135	218	65
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1766	1541	1767	1766	1541	1767	1856	1541	1767	1856	1541
Queue Service Time (g_s), s	1.2	4.4	2.0	2.2	1.6	1.0	1.9	3.1	0.6	3.3	4.8	1.5
Cycle Queue Clearance Time (g_c), s	1.2	4.4	2.0	2.2	1.6	1.0	1.9	3.1	0.6	3.3	4.8	1.5
Green Ratio (*g/C*)	0.05	0.18	0.18	0.08	0.21	0.21	0.11	0.18	0.26	0.10	0.16	0.22
Capacity (*c*), veh/h	91	644	281	138	738	322	203	335	399	175	306	334
Volume-to-Capacity Ratio (*X*)	0.537	0.603	0.289	0.679	0.210	0.129	0.416	0.438	0.073	0.772	0.711	0.193
Back of Queue (*Q*), ft/ln (95 th percentile)	22	70	27	41	24	13	32	51	8	59	85	20
Back of Queue (*Q*), veh/ln (95 th percentile)	0.8	2.7	1.1	1.6	1.0	0.5	1.3	2.0	0.3	2.3	3.3	0.8
Queue Storage Ratio (*RQ*) (95 th percentile)	0.14	0.14	0.05	0.27	0.05	0.03	0.16	0.10	0.02	0.59	0.17	0.04
Uniform Delay (d_1), s/veh	20.1	16.3	15.4	19.5	14.2	14.0	17.9	15.9	12.2	19.1	17.2	13.9
Incremental Delay (d_2), s/veh	1.8	0.3	0.2	2.2	0.1	0.1	0.5	0.3	0.0	2.7	1.4	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	22.0	16.7	15.6	21.7	14.3	14.1	18.4	16.2	12.2	21.8	18.6	14.0
Level of Service (LOS)	C	B	B	C	B	B	B	B	B	C	B	B
Approach Delay, s/veh / LOS	17.0	B		16.7	B		16.5	B		18.9	B	
Intersection Delay, s/veh / LOS	17.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	2.42	B	2.43	B
Bicycle LOS Score / LOS	0.92	A	0.73	A	0.92	A	1.18	A

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HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	0.250
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	0.96
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	Centennial at Lacey	File Name	Centennial at Lacey Existing plus Project PM.xus		
Project Description	Existing plus Project PM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	95	325	98	121	331	129	134	322	42	133	201	62

Signal Information			
Cycle, s	49.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow	0.0	0.0	0.0	0.0	0.0	0.0	
Red	0.0	0.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.7	13.4	9.6	14.3	10.9	16.0	10.0	15.1
Change Period, ($Y+R_c$), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Clearance Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

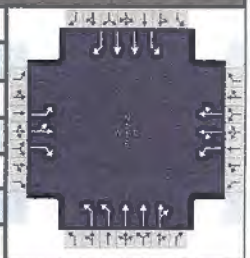
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Adjusted Saturation Flow Rate (s), veh/h/ln	0	0	0	0	0	0	0	0	0	0	0	0
Queue Service Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Queue Clearance Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C)	0.08	0.17	0.17	0.09	0.19	0.19	0.12	0.22	0.32	0.10	0.21	0.28
Capacity (c), veh/h	134	609	265	166	672	293	212	417	491	180	384	436
Volume-to-Capacity Ratio (X)	0.738	0.556	0.353	0.762	0.513	0.441	0.658	0.804	0.083	0.770	0.546	0.132
Back of Queue (Q), ft/ln (95 th percentile)	51	72	39	64	71	53	66	163	12	70	88	18
Back of Queue (Q), veh/ln (95 th percentile)	2.0	2.8	1.5	2.5	2.8	2.1	2.6	6.4	0.5	2.7	3.5	0.7
Queue Storage Ratio (RQ) (95 th percentile)	0.34	0.14	0.08	0.42	0.14	0.11	0.33	0.33	0.02	0.70	0.18	0.04
Uniform Delay (d_1), s/veh	22.2	18.6	17.9	21.7	17.8	17.6	20.6	18.0	11.7	21.5	17.4	13.1
Incremental Delay (d_2), s/veh	3.0	0.3	0.3	2.7	0.2	0.4	1.3	4.2	0.0	2.6	0.9	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.2	18.9	18.2	24.4	18.1	18.0	21.9	22.2	11.7	24.1	18.3	13.2
Level of Service (LOS)	C	B	B	C	B	B	C	C	B	C	B	B
Approach Delay, s/veh / LOS	19.9	B		19.4	B		21.3	C		19.6	B	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.11	B	2.43	B	2.43	B
Bicycle LOS Score / LOS	0.93	A	0.98	A	1.34	A	1.16	A

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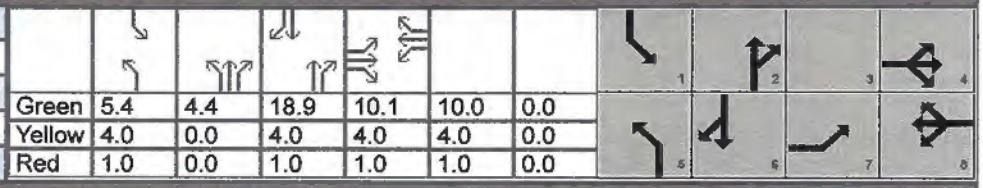
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	1.000
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	1.00
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	12th Avenue at Centenn...	File Name	12 at Centennial Existing plus Project AM.xus		
Project Description	Existing PLUS Project AM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	22	63	197	135	46	11	222	470	496	41	443	23

Signal Information			
Cycle, s	68.8	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.4	4.4		18.9	10.1	10.0	0.0					
Yellow	4.0	0.0		4.0	4.0	4.0	0.0					
Red	1.0	0.0		1.0	1.0	1.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		9.0		10.0	2.0	4.0	2.0	3.0
Phase Duration, s		15.1		15.0	14.9	28.3	10.4	23.9
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (MAH), s		3.3		3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		9.7		6.9	6.1	20.5	3.5	9.2
Green Extension Time (g_e), s		0.4		0.3	0.2	2.7	0.0	3.4
Phase Call Probability		1.00		1.00	0.99	1.00	0.54	1.00
Max Out Probability		0.00		0.00	0.42	0.20	0.00	0.01

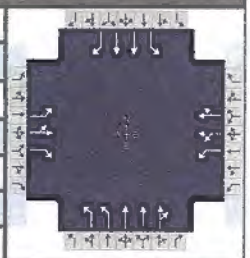
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	22	63	178	135	28	28	222	470	446	41	443	23
Adjusted Saturation Flow Rate (s), veh/h/ln	1767	1856	1541	1767	1856	1707	1716	1856	1541	1767	1766	1541
Queue Service Time (g_s), s	0.7	2.1	7.7	4.9	0.9	1.0	4.1	6.6	18.5	1.5	7.2	0.8
Cycle Queue Clearance Time (g_c), s	0.7	2.1	7.7	4.9	0.9	1.0	4.1	6.6	18.5	1.5	7.2	0.8
Green Ratio (g/C)	0.15	0.15	0.15	0.15	0.15	0.15	0.14	0.34	0.34	0.08	0.27	0.27
Capacity (c), veh/h	259	272	226	257	270	248	491	1257	522	140	970	423
Volume-to-Capacity Ratio (X)	0.085	0.232	0.788	0.526	0.105	0.111	0.452	0.374	0.855	0.293	0.457	0.054
Back of Queue (Q), ft/ln (95 th percentile)	14	40	129	91	18	17	73	119	286	29	126	12
Back of Queue (Q), veh/ln (95 th percentile)	0.5	1.6	5.1	3.6	0.7	0.7	2.9	4.6	11.5	1.1	4.9	0.5
Queue Storage Ratio (RQ) (95 th percentile)	0.05	0.08	0.26	0.41	0.04	0.03	0.29	0.24	0.59	0.16	0.25	0.02
Uniform Delay (d_1), s/veh	25.4	26.0	28.4	27.2	25.5	25.6	27.0	17.2	21.2	29.9	20.7	18.4
Incremental Delay (d_2), s/veh	0.1	0.2	2.4	0.6	0.1	0.1	0.2	0.1	7.5	0.4	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.4	26.1	30.7	27.9	25.6	25.6	27.3	17.3	28.7	30.3	20.8	18.4
Level of Service (LOS)	C	C	C	C	C	C	C	B	C	C	C	B
Approach Delay, s/veh / LOS	29.2	C		27.2	C		23.7	C		21.5	C	
Intersection Delay, s/veh / LOS	24.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.65	C	2.59	C	2.10	B	2.30	B
Bicycle LOS Score / LOS	0.92	A	0.65	A	1.11	A	0.91	A

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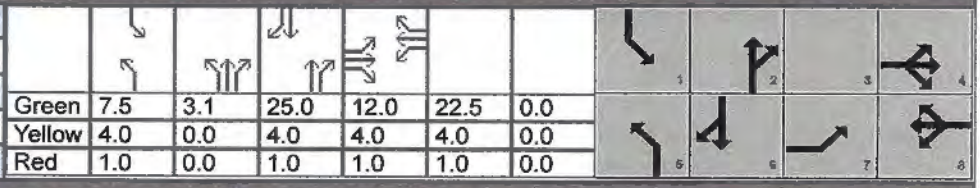
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Visalia			Duration, h	1.000
Analyst	CC	Analysis Date	5/21/2025	Area Type	Other
Jurisdiction		Time Period	2029 AM Peak	PHF	1.00
Urban Street		Analysis Year	2025	Analysis Period	1> 7:00
Intersection	12th Avenue at Centenn...	File Name	12 at Centennial Existing plus Project PM.xus		
Project Description	Existing plus Project PM Peak Hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	105	92	205	405	102	20	320	555	172	55	833	53

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.5	3.1		25.0	12.0	22.5	0.0					
Yellow	4.0	0.0		4.0	4.0	4.0	0.0					
Red	1.0	0.0		1.0	1.0	1.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		9.0		10.0	2.0	4.0	2.0	3.0
Phase Duration, s		17.0		27.5	15.5	33.1	12.5	30.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		3.2		3.1	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		12.7		22.1	10.2	11.2	4.7	22.1
Green Extension Time (g_e), s		0.0		0.4	0.4	3.6	0.0	1.4
Phase Call Probability		1.00		1.00	1.00	1.00	0.75	1.00
Max Out Probability		1.00		1.00	0.22	0.08	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	105	92	186	405	62	59	320	465	212	55	833	53
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1856	1541	1767	1856	1720	1716	1856	1648	1767	1766	1541
Queue Service Time (g_s), s	4.9	4.1	10.7	20.1	2.3	2.4	8.2	8.9	9.2	2.7	20.1	2.3
Cycle Queue Clearance Time (g_c), s	4.9	4.1	10.7	20.1	2.3	2.4	8.2	8.9	9.2	2.7	20.1	2.3
Green Ratio (*g/C*)	0.13	0.13	0.13	0.25	0.25	0.25	0.12	0.31	0.31	0.08	0.28	0.28
Capacity (*c*), veh/h	236	247	205	441	463	429	402	1157	514	147	981	428
Volume-to-Capacity Ratio (*X*)	0.446	0.372	0.905	0.918	0.133	0.139	0.797	0.402	0.413	0.375	0.849	0.124
Back of Queue (*Q*), ft/ln (95 th percentile)	97	84	288	435	46	44	163	173	156	53	373	41
Back of Queue (*Q*), veh/ln (95 th percentile)	3.8	3.3	11.3	17.0	1.8	1.7	6.4	6.8	6.2	2.1	14.6	1.6
Queue Storage Ratio (*RQ*) (95 th percentile)	0.39	0.17	0.58	1.93	0.09	0.09	0.65	0.35	0.32	0.29	0.75	0.08
Uniform Delay (d_1), s/veh	35.9	35.6	38.4	32.9	26.2	26.2	38.7	24.4	24.5	39.1	30.7	24.3
Incremental Delay (d_2), s/veh	0.5	0.3	52.8	26.2	0.0	0.1	3.3	0.1	0.2	0.6	9.9	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	36.4	35.9	91.2	59.1	26.3	26.3	42.0	24.5	24.7	39.6	40.7	24.9
Level of Service (LOS)	D	D	F	E	C	C	D	C	C	D	D	C
Approach Delay, s/veh / LOS	62.9	E		51.6	D		30.1	C		39.7	D	
Intersection Delay, s/veh / LOS	41.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.65	C	2.60	C	2.11	B	2.31	B
Bicycle LOS Score / LOS	1.12	A	0.92	A	1.04	A	1.26	A

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