

DOCKETED

Docket Number:	08-AFC-10C
Project Title:	Lodi Energy Center Project
TN #:	232386
Document Title:	Lodi Energy Center - Petition to Amend - Storage Area
Description:	Lodi Energy Center request to increase permitted acreage to include former temporary laydown area as permanent storage area.
Filer:	Mary Dyas
Organization:	NCPA - Northern California Power Agency
Submitter Role:	Energy Commission
Submission Date:	3/12/2020 9:02:44 AM
Docketed Date:	3/12/2020



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March 11, 2020

Ms. Mary Dyas
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento CA 95814

**Subject: Northern California Power Agency (NCPA)
Lodi Energy Center – LEC Storage Area**

Dear Ms. Dyas,

Northern California Power Agency (NCPA) is requesting approval of a 2.323 acre area to increase the permitted acreage of Lodi Energy Center (LEC) to include the former temporary Laydown Area F as a permanent storage area. The proposed permanent storage area is located on the western side of the existing site in San Joaquin County, California (Figure 1). This area was previously identified as a temporary Laydown Area F during the construction phase of LEC (Attachment A). During construction, Laydown Area F was mitigated for temporary impacts but it was not utilized during the construction. Currently, the area is being used for storage by the City of Lodi for concrete conveyance materials (pipe segments and vaults).

NCPA is proposing to use this area for storage on a permanent basis. This area is on the west side of the current facilities and is located within the U.S. Geological Survey (USGS) 7.5-minute Terminus quadrangle in sections 23 and 24, township 03 North, Range 05 East, of the Mount Diablo Base Meridian.

The proposed storage area's northern boundary is bordered by irrigated agricultural land and the City of Lodi White Slough Water Pollution Control Facility. The eastern boundary abuts the NCPA electrical switchyard. The southern boundary lies approximately 200 Feet to the north of an irrigation canal. The site is nearly level, minor grading will be used to smooth the area. Gravel will be placed to allow year round vehicle access and for placement of Conex storage containers and open storage.

Site access would be from the northwest corner of the NCPA LEC site. The Fencing along the northwestern boundary if the NCPA site would be removed and extended around the storage area for controlled access and security.

As requested by California Energy Commission (CEC) NCPA conducted a Biological Resource Assessment and an environmental assessment (Phase 1) for the site.

Please find attached the following:

- Figure 1 - Site and Surround Area;
- Figure 2 - Storage Area;
- Attachment A – California Energy Commission's (CEC) project change questionnaire;
- Attachment B - Final Memorandum Biological Resource Assessment; and
- Attachment C - Site Phase 1 Assessment.

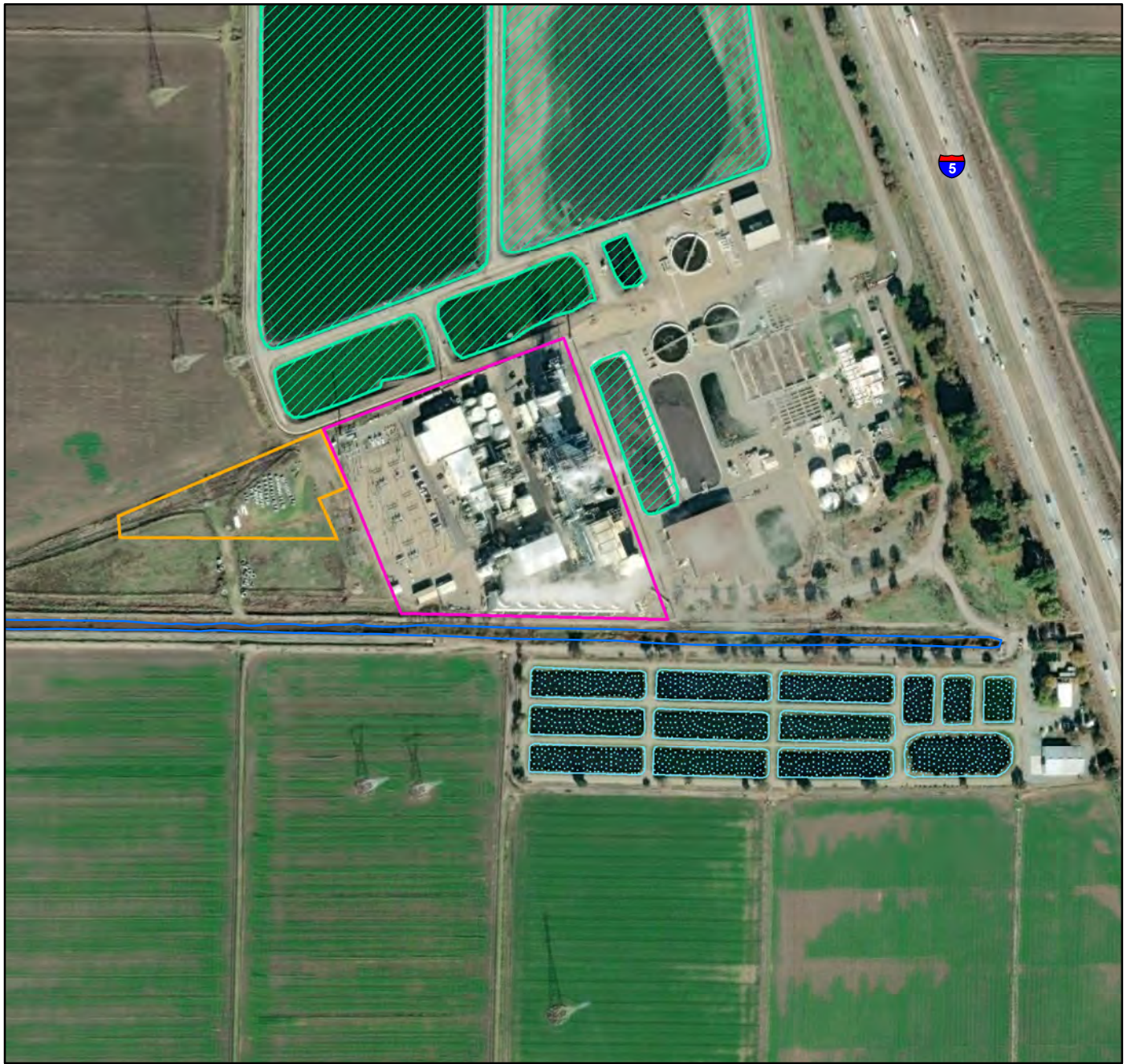
Please do not hesitate to contact me at (209) 210-5009 if you need further information or have additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Fallon', with a large, stylized loop at the end.

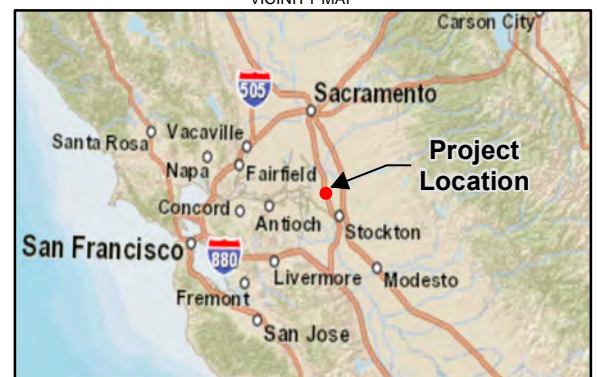
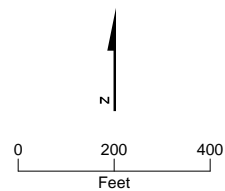
Michael J. Fallon
NCPA – Lodi Energy Center
Compliance Manager

Figure 1
Site and Surrounding Area



VICINITY MAP

- NCPA-LEC
- Irrigation Canal
- Waste Water Treatment Facility Pond
- Vector Control Pond
- Proposed Storage Area



Source:
Irrigation Canal and man-made ponds; Lodi Energy Center - Wetland
Concerns, Technical Memorandum, CH2M HILL. January 9, 2000

Note:
This map was compiled from various scale source data and maps and is intended
for use as only an approximate representation of actual locations.

FIGURE 1
NCPA - Lodi Energy Center and Proposed Storage Area
NCPA - Lodi Energy Center
Lodi, California

Figure 2
Storage Location



Measure distance
Click on the map to add to your path
Total area: 101,200.02 ft² (9,401.79 m²)
Total distance: 1,570.93 ft (478.82 m)

Attachment A

California Energy Commission's (CEC) Project Change
Questionnaire



September 24, 2019

Ms. Mary Dyas
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento CA 95814

**Subject: Northern California Power Agency (NCPA)
Lodi Energy Center – LEC Storage Area Review**

Dear Ms. Dyas,

Please find attached California Energy Commission's (CEC) project change questionnaire requesting review on a proposed project to increase a storage area at the Northern California Power Agency's (NCPA) Lodi Energy Center (LEC).

Please do not hesitate to contact me at (209) 210-5009 if you need further information or have additional questions.

Sincerely,

Michael J. Fallon
NCPA – Lodi Energy Center

CALIFORNIA ENERGY COMMISSION

PROJECT CHANGE QUESTIONNAIRE



PROJECT:Permenent Project Laydown Area (NCPA – LEC)

AFC No.:Click or tap here to enter text.

CONTACT:Michael Fallon

DATE 9/24/19

1. Please describe the project change.

Northern California Power Agency (NCPA) is proposing to increase the stoage and construction laydown area at the Lodi Energy Center (LEC). The proposed area is a 2.6 acre triangular area directly west of the switch yard (see attached map). This area was approved and used during the construction phase of the CT-1 (LEC) in 2010 (Attached: Approval and Request of Additional Laydown Area dated July 2010). NCPA is requesting to make perment Laydown Area F of the attached document. This area would be used during maintenance and repair outages for paking, equipment storage and pre-assembly of parts.

2. Would the proposed project change cause a direct physical change or reasonably foreseeable indirect physical change to the site or equipment on site? If yes, please explain.

a. Is the proposed project change to software? ☐ Yes ☒ No

b. Is there a change to method of operation or how the facility is being operated

The physical change to the plant area would include minor grading and installation of gravel road base or aphalt, parimeter fencing, storage containers, and construction parking.

3. Please describe why the project change is needed (e.g., due to changes in regulation or operation and maintenance specifications, equipment or component failure)?

During system repair and maintenance outages when multiple contractors are onsite conducting activies their is a need for additional laydown, storage and parking. This will reduce vehicle congestion in the alley ways between plant and equipment resulting in inhanced safety, work efficiency, and cost savings.

4. Would the proposed project change require a change to existing conditions of certification? ☐ Yes ☒ No

If yes, please list the conditions of certification affected.

Click or tap here to enter text.

5. Would the proposed project change result in a temporary or permanent non-conformance with existing LORS? ☐ Yes ☒ No

If yes, please list the applicable LORS and describe the non-conformance

Click or tap here to enter text.

6. Would the proposed project change affect the project's design, operation, or performance requirements as described in the Final Commission Decision and any documents incorporated by reference (e.g. AFC, FSA, etc.)?

☐ Yes ☒ No

7. Is there a change to the project description as listed in the Final Commission Decision?

☒ Yes ☐ No

8. Would the proposed project change have any significant adverse environmental or public health and safety impacts?

☐ Yes ☒ No

If yes, how were the impacts determined and what mitigation measures are proposed?

Click or tap here to enter text.

9. Does the proposed project change affect the public, including nearby property owners and residents?

☐ Yes ☒ No

If yes, how?

Click or tap here to enter text.

10. Are there any additional permits from other agencies required and proposed timing?

☒ Yes ☐ No

11. What is the proposed timing/schedule for demolition, construction, and commissioning?

NCPA is proposing to have the 2.6 acre area ready of use by Spring 2020



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

0 150 300 600 Feet

N

FIGURE 1
LAYDOWN AREAS
 LODI ENERGY CENTER
 LODI, CALIFORNIA



CH2M HILL

2485 Natomas Park Drive

Suite 600

Sacramento, CA 95833-2937

Tel 916.920.0300

Fax 916.920.8463

July 2, 2010

Mr. Rod Jones
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Lodi Energy Center (08-AFC-10)
Amendment 1 - Request for Additional Laydown Areas

Dear Mr. Jones:

Attached please find one hard copy and one electronic copy of Northern California Power Agency's Amendment 1, Request for Additional Laydown Areas. If you have any questions about this matter, please contact me at (916) 286-0249 or Andrea Grenier at (916) 780-1171.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Sarah Madams".

Sarah Madams
AFC Project Manager

Attachment

cc: A. Grenier
E. Warner/NCPA

*Amendment 1
Request for Additional Laydown Areas*



LODI ENERGY CENTER

(08-AFC-10)

EY062008001SAC

July 2010

Submitted by



Submitted to

California Energy Commission

With Technical Assistance by

CH2MHILL

Request for Additional Laydown Areas

Amendment 1
for the
Lodi Energy Center
Lodi, California
(08-AFC-10C)

Submitted to the
California Energy Commission

June 2010

Prepared by



With Technical Assistance by

CH2MHILL
Sacramento, CA

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Appendix

A	Soil Impact Loss Calculations
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Figure

1	Project Laydown Areas
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SECTION 1

Introduction

Background

On April 21, 2010, the California Energy Commission (CEC) approved and licensed Northern California Power Agency's (NCPA) Lodi Energy Center (LEC). The LEC project is a nominal 296-megawatt (MW) combined-cycle power plant located in the City of Lodi. The LEC is proposed for a site parcel of approximately 4.4 acres adjacent to the City of Lodi's White Slough Water Pollution Control Facility (WPCF) to the east, treatment and holding ponds associated with the WPCF to the north, the existing 49-MW NCPA Combustion Turbine Project #2 (STIG plant¹) to the west, and the San Joaquin County Mosquito and Vector Control facility to the south. The project site is on land owned and incorporated by the City of Lodi, and is approximately 6 miles west of the Lodi city center. The city of Stockton is approximately 2 miles south.

The LEC will receive recycled water provided by the WPCF via a pipeline in the utility corridor connecting the LEC and the WPCF. Construction water will be supplied from the WPCF. The existing 230-kilovolt (kV) switchyard will be shared by the existing NCPA Combustion Turbine Project #2 (STIG) and LEC facilities. An additional high-voltage circuit breaker and other equipment will be added to the existing switchyard to accommodate the LEC. Natural gas for the project will be supplied from a new Pacific Gas and Electric (PG&E) 2.7-mile-long natural gas pipeline. Construction of the project will begin in the second quarter of 2010 and commercial operation is expected to commence in the second quarter of 2012.

Description of Proposed Amendment

The purpose of this filing is to request the CEC's approval to amend the LEC project description to include an additional 9.4 acres of laydown area adjacent to the LEC site. As shown in Figure 1, this additional area includes a 2.6-acre triangular piece along the western border of the switchyard (referred to as Area F), a 6.1-acre area near the Frontage Road adjacent to I-5 (referred to as Area E), and the extension of Area A to the north, an increase from 3.1 acres to 3.8 acres. The construction laydown and parking areas approved in the CEC Final Decision, totaled 9.8 acres. The additional 9.4-acre areas proposed for laydown increases the total construction laydown and parking area to 19.2 acres. More detailed information on these proposed changes is provided in Section 2.

Necessity of Proposed Changes

Sections 1769 (a)(1)(A), (B), and (C) of the CEC Siting Regulations require a discussion of the necessity for the proposed revisions to the LEC project and whether the revisions are based on information known by the petitioner during the certification proceeding. These proposed

¹ "STIG plant" refers to the NCPA Combustion Turbine Project, which is a steam turbine injected gas turbine (STIG) plant

changes were not known by the Applicant until after certification and are necessary to facilitate construction and reduce costs associated with construction of the new transmission facilities; described in further detail in Section 2.

Summary of Environmental Impacts

Section 1769 (a)(1)(E) of the CEC Siting Regulations requires that an analysis be conducted to address impacts the proposed revisions may have on the environment and proposed measures to mitigate significant adverse impacts. Section 1769 (a)(1)(F) requires a discussion of the impacts of proposed revisions on the facility's ability to comply with applicable laws, ordinances, regulations, and standards (LORS). Section 3 discusses the potential impacts of the proposed changes on the environment, as well as the proposed revisions' consistency with LORS.

Consistency of Changes with License

Section 1769 (a)(1)(D) of the CEC Siting Regulations requires a discussion of the consistency of each proposed project revision with the assumptions, rationale, findings, or other bases of the Final Decision and whether the revision is based on new information that changes or undermines the bases of the final decision. Also required is an explanation of why the changes should be permitted. As set forth in the following sections, the proposed revisions do not undermine the assumptions, rationale, findings, or other basis of the Final Decision for the project.

SECTION 2

Location for the Additional Laydown Area

Figure 1 shows the additional locations for the laydown areas to be used for supplementary staging of equipment (Figure 1 is provided at the end of the document). The additional laydown areas total approximately 9.4 acres. These additional areas will include a triangular piece along the western border of the switchyard (referred to as Area F), an area near the entry to the site on the Frontage Road adjacent to Interstate 5 (I-5) (referred to as Area E), and the extension of Area A to the north. The additional Laydown Areas E and F historically have been disturbed by agricultural activities. Laydown Area A previously has been disturbed during construction and operation of the WPCF.

Necessity of Proposed Changes

Sections 1769 (a)(1)(B) and 1769(a)(1)(C) of the CEC Siting Regulations require a discussion of the necessity for the proposed changes to the project and whether this modification is based on information that was known by the petitioner during the certification proceeding.

The need for additional laydown areas was not known to NCPA during the LEC licensing process. It was only discovered during the recently completed public bidding process that occurred after the certification, in that all of the construction contractors indicated in their bids that additional laydown area would be needed to complete construction of the LEC in a cost-effective manner. In addition, the City of Lodi has indicated that some of the original laydown areas allocated to the LEC project need to be reserved for its own projects. As a result, NCPA is requesting CEC approval of the additional laydown areas identified in this document.

SECTION 3

Environmental Analysis of the Additional Laydown Areas

The additional laydown areas provide the LEC project with additional staging areas during project construction. An analysis of each of the environmental areas included in the Application for Certification (AFC) is presented below. Additionally, the applicable LORS contained in the AFC have been reviewed to confirm consistency with applicable LORS.

3.1 Subject Matter Unaffected by the Additional Laydown Areas

Most of the subjects considered have no potential to be affected by the additional laydown areas. These unaffected subjects include Air Quality; Geologic Resources and Hazards; Hazardous Materials Management; Land Use; Noise and Vibration; Public Health; Socioeconomics; Traffic and Transportation; Visual Resources; Waste Management; and Worker Safety and Fire Protection.

3.2 Biological Resources

The additional laydown areas will temporarily affect approximately 9.4 acres of disturbed land adjacent to the boundary of the project site, and within areas previously disturbed during construction and operation of the present WPCF, and historically disturbed by ongoing agricultural activities. Surveys for wildlife usage, wetlands, nesting avian species and rare plants of the additional laydown areas were conducted on February 15, April 13, and June 16, 2010, by CH2M HILL biologists Rick Crowe, Dan Williams, and Russell Huddleston. As shown in Figure 1, the additional laydown areas will not be within the buffer zone previously analyzed in the AFC. No additional LORS will be triggered as a result of the temporarily impacted additional laydown areas. Therefore, any potential biological resource impacts associated with the proposed change in the size and location of the laydown areas will be less than significant after mitigation discussions with the San Joaquin County Council of Governments (SJCCOG), which implements the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (MSHCP).

Biological Setting

Laydown Area A

The CEC Final Decision approved Laydown Area A as 3.1 acres. NCPA is requesting that this area be expanded by 0.7 acres, thereby increasing total temporary impacts for Laydown Area A to 3.8 acres. The additional impacts are to the same open ruderal grassland as originally described in the AFC. Generally, Laydown Area A is a ruderal grassland consisting of dense rip-gut brome (*Bromus diandrus*), yellow-star thistle (*Centaurea solstitialis*), wild radish (*Raphanus sativa*), black mustard (*Brassica nigra*), and fiddleneck (*Amsinckia menziesii*). A few small valley oaks (*Quercus lobata*) are present at the north end of the expanded laydown area. No trees would be removed from this area.

Additionally, this ruderal grassland is routinely mowed as part of WPCF facility maintenance and fire protection practices. The area will be restored to pre-disturbance conditions following the completion of construction activities.

Laydown Area E

Laydown Area E is located directly north of the Frontage Road entrance to the LEC project site and the existing WPCF and STIG facilities near I-5. This 6.1-acre site is characterized by very dense ruderal vegetation including foxtail barley (*Hordeum murinum*), Italian ryegrass (*Lolium multiflorum*), rip-gut brome (*Bromus diandrus*), wild oats (*Avena barbata*, *A. Fatua*), soft chess (*Bromus hordeaceus*), wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), and fiddleneck (*Amensinckia menziesii*). There is a small agricultural drainage adjacent to the northern most portion of Laydown Area E; however, it is dominated by the same vegetation as the laydown area and is devoid of wetland vegetation. Wildlife observed during the February through June surveys consisted of California ground squirrels (*Spermophilus beecheyi*) and burrows along the northern edge of the site and around the perimeter of the proposed laydown area. Additionally, red-tail hawks (*Buteo jamaicensis*), Swainson's hawks (*Buteo swainsonii*), and a white-tailed kite (*Elanus leucurus*) were observed foraging and flying over the proposed laydown area along with typical grassland species. Red-winged blackbird (*Agelaius phoeniceus*), rock dove (*Columba livia*), Savannah sparrow (*Passerculus sandwichensis*), and Brewer's blackbird (*Euphagus cyanocephalus*) were observed flying over or foraging in this area. Laydown Area E is devoid of trees and therefore provides limited nesting structures for avian species. This ruderal agricultural area is routinely disked for fire suppression and cultivation. The area will be restored to pre-disturbance conditions following the completion of construction activities.

Laydown Area F

Laydown Area F is a 2.6-acre triangular area directly west of the existing STIG switchyard and STIG plant. This site is characterized by a lush growth of ruderal grassland, including milk thistle (*Silybum maritimum*); Italian thistle (*Carduus pycnocephalus*); perennial pepperweed (*Lepidium latifolium*); and other common ruderal grasses and forbs including rip-gut brome, soft chess, Italian rye grass, and black mustard. Laydown Area F is devoid of trees and therefore provides limited nesting structures for avian species. Wildlife observed in the vicinity of the laydown area included black phoebe (*Sayornis nigricans*), northern harrier (*Circus cyaneus*), belted kingfisher (*Ceryle alcyon*), killdeer (*Charadrius vociferus*), and ground squirrels with burrows. Coyote (*Canis latrans*) scat also was observed. This ruderal agricultural area is routinely disked or mowed for fire suppression. Laydown Area F is located just north of the giant garter snake upland habitat as identified in the Variance Request for Giant Garter Snake Upland Habitat (CH2M HILL, 2009), but it will not encroach on the 200-foot-buffer area approved in the CEC Final Decision. The upland setback area will be silt fenced to delineate the extent of disturbance and keep construction personnel and equipment out of the area. Laydown Area F will be restored to pre-disturbance conditions following the completion of construction activities.

Mitigation

Based on discussions with Mr. Steve Mayo, Senior Habitat Planner with SJCOG, mitigation is required for the loss of agricultural land from the use of Laydown Area F (2.6-acres) and

the additional acreage requested for Laydown Area A (0.7-acres). Mr. Mayo stated that mitigation for the Laydown Area E (6.1-acres) is not required because this parcel falls into Category A Exempt (No pay zone) based on the City of Lodi Compensation Map that was developed for parcels in the Lodi area by SJCOG. Therefore, the estimated mitigation costs for the temporary loss of agricultural land based on the 2010 SJCOG habitat fee structure is \$48,229.50. These monies will mitigate for the loss of 3.3-acres of agricultural land at \$14,615.00 an acre. This mitigation agreement will be entered into by submitting an application request to SJCOG.

3.3 Cultural Resources

The additional laydown areas are located adjacent to the LEC site, in areas previously disturbed during construction and operation of the present WPCF and historically disturbed by agricultural activities.

A literature search of the area, including a 1-mile radius surrounding the LEC site was conducted during preparation of the AFC. The additional laydown areas fall within this 1-mile radius. No resources have been previously documented within the additional laydown areas. CH2M HILL conducted an intensive pedestrian field survey of the revised laydown areas on May 18, 2010. The additional laydown areas are heavily disturbed and visibility was 100 percent. No cultural resources were observed as a result of the pedestrian field survey of the revised laydown areas. There are no known cultural resources in the revised laydown areas that are eligible for listing in the National Register of Historic Places or the California Register of Historic Resources.

The revised laydown areas will not result in potential impacts greater than those analyzed in the AFC, and no LORS will change as a result of the revised laydown areas. Therefore, any potential cultural resources impacts associated with the proposed change in the size and location of the laydown areas will be less than significant.

3.4 Paleontology

The additional laydown areas are adjacent to the boundary of the project site, in areas previously disturbed during construction and operation of the present WPCF and historically disturbed by agricultural activities. Because the revised laydown area has been subjected to previous ground disturbance activities and no new excavations are anticipated at the laydown areas the additional laydown areas will not result in potential impacts greater than those analyzed in the AFC and will comply with applicable LORS. Because mitigation measures proposed in the AFC will be employed, any potential paleontological resource impacts will be less than significant given application of those mitigation measures.

3.5 Soils

Soil classification of the additional laydown areas were provided in the AFC. Soil loss by water erosion during construction has been estimated for the additional laydown areas, using the Revised Universal Soil Loss Equation (RUSLE2). Results and detailed calculations are provided in Appendix A.

With the implementation of appropriate best management practices (BMPs) that will be implemented under the Construction Stormwater Pollution Prevention Plan (SWPPP), the total projected soil loss with the additional laydown areas increases from 0.20 tons to 0.21 ton and is considered to be a minimal amount and would not constitute a significant impact. The estimate of accelerated soil loss by water is very conservative (overestimate of soil loss) because it assumes only a single BMP (i.e., silt fencing), whereas the SWPPP will require multiple soil erosion control measures.

3.5.1 Wind Erosion

Potential fugitive dust resulting from the wind erosion of exposed soil was calculated for the additional laydown area using the emission factor in AP-42 (U.S. Environmental Protection Agency [EPA], 1995; also in Table 11.9-4 of Bay Area Air Quality Management District [BAAQMD], 2005).

Appendix A summarizes the mitigated total suspended particulates (TSP) predicted to be emitted from the site from grading and the wind erosion of exposed soil. Without mitigation, the maximum predicted erosion of material from the site and laydown areas has increased from 2.18 tons to an estimated 2.43 tons over the course of the project construction cycle. This estimate of 2.43 tons would be reduced with mitigation measures, from 0.79 ton (as presented in the AFC) to approximately 0.89 ton (with the additional laydown areas) by implementing basic mitigation measures, such as water application. These estimates are conservative because they make use of emission rates for a generalized soil rather than for site-specific soil properties.

With implementation of the appropriate BMPs that will be required for this project, the additional potential soil impacts are less than significant. Revision of the laydown area will be consistent with applicable LORS, and any potential soil impacts will be less than significant.

3.6 Water Resources

Use of the additional laydown areas will require additional water for dust suppression on the 9.4 acres of additional laydown area. However, water for dust suppression for the laydown area will be minimal and is not anticipated to create impacts on either groundwater or stormwater. NCPA will use water from the WPCF for dust suppression activities during laydown area use. All of these uses are temporary and construction related. Use of the additional laydown areas will not result in potential impacts greater than those analyzed in the AFC and will comply with applicable LORS. As a result, any potential water resource impacts will be less than significant.

SECTION 4

Potential Effects on the Public and Property Owners

The proposed change described in this amendment will have no effect on the public and property owners beyond what was originally approved by the CEC².

The additional laydown areas are temporary and minimal and will result in no greater impacts on the public and property owners than those analyzed during project licensing. Therefore, impacts on the public and property owners are expected to be the same than those analyzed during the license proceeding for the project.

² CEC Siting Regulations Section 1769(a)(1)(G) and (I)

SECTION 5

List of Property Owners

The list of property owners within 1,000 feet of the proposed project provided in the AFC has not changed as a result of the additional laydown areas. Therefore, the list of property owners within 1,000 feet of the proposed project is incorporated by reference from the AFC.³

³ CEC Siting Regulations Section 1769(a)(1)(H).

Figure



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

Appendix A

Soil Impact Loss Calculations

Table 5.11-3. Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation (RUSLE2)

Feature (acreage) ²	Activity	Duration (months)	Estimates Using Revised Universal Soil Loss Equation ¹		
			Soil Loss (tons) without BMPs	Soil Loss (tons) with BMPs	Soil Loss (tons/yr) No Project
Site (4.4 acres)	Grading	2	0.8	0.010	0.0233
	Construction	22	4.1	0.113	---
Laydown Areas (A through F - 18.5 acres) (0 acres exposed; either paved or gravelled)	Grading	1	1.7	0.022	0.0981
	Construction	23	0.0	0.000	---
Gas Supply Pipeline (1.30 acre trench; 9.73 acre construction corridor)	Grading	3	2.67	0.0340	0.0515
	Construction	3	1.24	0.0340	---
Transmission Line Pole (0.0004 acre for pole footprint)	Grading	0	0.00	0.00	0.0000
	Construction	0	0.00	0.00	---
Project Soil Loss Estimates	All activities listed above	20	10.53	0.213	0.173

Notes:

- Soil losses (tons/acre/year) are estimated using RUSLE2 software available online [http://fargo.nserl.purdue.edu/rusle2_dataweb/].
 - The soil characteristics were estimated using RUSLE2 soil profiles corresponding to the mapped soil unit.
 - Soil loss (R-factors) were estimated using 2-year, 6-hour point precipitation frequency amount for the LEC Project site found at [<http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>].
 - Estimates of actual soil losses use the RUSLE2 soil loss times the duration and the affected area. The No Project Alternative estimate does not have a specific duration so loss is given as tons/year.

Other Project Assumptions as follows:

- It is assumed that 100% of the LEC site and laydown areas will be exposed during grading, and approximately 10% of the site will be bare soil during construction.
- It is assumed that grading the site will take 2 months and construction will take 22 months.
- It is assumed that grading for laydown areas will take 1 month and that the area will be covered (gravelled or paved) immediately thereafter.
- It is assumed that soil loss will be negligible from the laydown areas once it is covered.
- It is assumed that the 14,122-foot gas pipeline will be installed within a 4-ft wide trench and a 30-ft construction corridor along existing roadways.
- It is assumed that the gas pipeline will take 3 months to construct and will take another 3 months before permanent cover is established.
- The water and sewer lines will be completed on-site, so no additional soil losses are estimated for them.
- It is assumed that no new off-site transmission poles are required.

RUSLE2 Assumptions as follows:

100-ft slope length. Estimated soil unit slope is the midpoint of the minimum and maximum of the unit slope class.

Construction soil losses assume the following inputs: Management - Bare ground; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Grading soil losses assume the following inputs: Management - Bare ground/rough surface; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Construction with BMP soil losses assume the following inputs: Management - Silt fence; Contouring - Perfect, no row grade; Diversion/terracing - None; Strips and Barriers - 2 fences, 1 at end of RUSLE slope.

No Project soil losses assume the following inputs: Management - Dense grass, not harvested; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Table 5.11-4. Estimate of Total Suspended Particulates (TSP) Emitted from Grading and Wind Erosion

Emission Source	Acreage	Duration (months)	Unmitigated TSP (tons)	Mitigated TSP (tons)
Grading Dust:				
Project Site	4.40	2	0.151	0.053
Laydown Areas (A through F)	18.50	1	0.204	0.111
Gas Supply Pipeline	1.30	3	0.536	0.188
Transmission Line Pole Holes	0.000	0.00	0.000	0.000
Wind Blown Dust:				
Project Site	4.40	22	0.307	0.107
Laydown Areas (A through F)	0.00	23	0.000	0.000
Gas Supply Pipeline	9.73	3	1.230	0.431
Transmission Line Pole Holes	0.000	0	0.0000	0.0000
Estimated Total			2.428	0.890

Notes:

All linear feature impacts noted above are for portions outside of the project areas footprints.

Project Assumptions:

Grading for project site will be completed in a 2 month period and construction will extend an additional 18 months.

Grading for laydown areas will be completed in a 1 month period and the site will be covered (gravelled or paved) immediately.

No new excavation for transmission line pole will be required

Approximately 1/10th of the project site has bare soil exposure during the length of the construction period.

Water and sewer line connections will be on site.

The gas supply line will be 14,122 feet long and installed primarily along roadway rights-of-way in a 4-ft trench with 30-ft construction corridor.

Data Sources:

^a PM10 Emission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, Level 2 Analysis Procedure, March 1996

^b PM10 to TSP Conversion Factor Source: Bay Area Air Quality Management District CEQA Guidelines, Assessing the Air Quality Impacts of Projects, December 1999.

SCAQMD CEQA Handbook (1993) Table 11-4 for mitigation efficiency rates (as summarized in Table 8.9-4)

Soil Type	Acreage		Soil Loss Estimates Using RUSLE2 software (tons/ac/year)			
Site		Slope	Grading	Construction w/o BMPs	Construction with BMPs	No Project
Site	4.40	1.0	1.1	0.51	0.014	0.0053
subtotal			4.84	2.24	0.06	0.0233
Laydown Areas (A through F)	18.50	1.0	1.1	0.51	0.014	0.0053
subtotal			20.35	9.44	0.259	0.0981
Gas Supply Pipeline	9.73	1.0	1.1	0.51	0.014	0.0053
subtotal			10.70	4.96	0.136	0.0515
Transmission Line Pole	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00
Process Water Line	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00
Sewer Line	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00

Assumptions:

Assumes slope is the mid-point of the slope class

100% of project site would be bare soil during grading.

100% of pole holes will be bare soil during grading/excavation.

The No Project soil loss assumes a 'dense grass, not harvested' management scenario.

Project: LEC Lodi Project
Dust from Wind Erosion - With and Without Mitigation

Grading		MRI factor of 0.011 tons/acre/month is based on 168 hours per month of construction activity.
PM10 Emission Factor (ton/acre/month) ^a	0.011	Fact Sheet, 4/26/2007.
Project Site		
Duration (months):	2	Assumes 2 months of active grading.
Site Acreage:	4.40	Assumes 100% of site is graded
PM10 Emitted (tons):	0.10	
TSP Emitted (tons) ^b :	0.151	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.053	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Laydown Areas (A through F)		
Duration (months):	1	Assumes one month to grade
Site Acreage:	18.50	Sum of Laydown areas A, B, C, D, E and F
PM10 Emitted (tons):	0.20	
TSP Emitted (tons) ^b :	0.318	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.111	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Gas Supply Line Trench		
Duration (months):	3.0	Assumes 3 months to construct pipeline
Site Acreage:	1.297	Assumes a 4-ft wide trench
PM10 Emitted (tons):	0.0428	
TSP Emitted (tons) ^b :	0.0669	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0234	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Hole		
Duration (months):	0.00	Assumes no transmission lines poles needed to connect
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Process Water Line Trench		
Duration (months):	0.0	Assumes on-site construction
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sewer Line Trench		
Duration (months):	0.0	Assumes on-site construction
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Unmitigated TSP Emitted (tons)	0.536	
Total Mitigated TSP Emitted (tons)	0.188	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

^aEmission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, March 1996, Level 2 Analysis Procedure

^b Conversion Factor Source: Bay Area Air Quality Management District (BAAQMD) BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans. December 1999

Wind Blown Dust		
TSP Emission Factor (ton/acre/year)	0.38	Emission Factor Source: AP-42, Section 11.9 Western Surface Coal Mining Table 11.9-4, January 1995.
Project Site		
Acres exposed	4.40	
Duration (months)	22	Assumes 22 months of construction for Project site area after grading
TSP Emitted for Site (tons):	0.307	Assumes 1/10th of the site is bare soil during 18 month construction period
Mitigated TSP Emitted (tons):	0.107	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Laydown Areas (A through F)		
Acres exposed	0.000	Sum of 6 laydown areas is 18.5 acres but all these areas are covered with gravel or other material after grading
Duration (months)	23	Assume 24 months for construction period (minus 1 month for grading)
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Gas Supply Line Corridor		
Acres exposed	9.726	Assumes 14,121.6-ft pipeline to east of site and construction corridor is 30 feet along side of road
Duration (months)	3	Assumes 3 months after excavating trench that permanent cover (i.e., paving) is established
TSP Emitted for Site (tons):	0.924	
Mitigated TSP Emitted (tons):	0.323	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Footprint		
Acres exposed	0.000	Assumes no new poles are needed to connect to existing T-line
Duration (months)	0.0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Process Water Line Corridor		
Acres exposed	0.000	Assumes on-site construction
Duration (months)	0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sewer Line Corridor		
Acres exposed	0.000	Assumes on-site construction
Duration (months)	0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total (tons) without mitigation	1.230	
Total (tons) with mitigation	0.431	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

Project: LEC- Steve Long input for areas on 5/30/08 - last revision on June 17, 2010

OBJECTID	AREAS	SYMBOL	Portion	Area or Length	Acres	Acreage_tot
LEC Site	149- Devries SL		100.0%		3.79	4.40 From Sarah Madams email dated 7/10/08
						0.44 Assumes only 10% of site is bare soil during construction
Laydown Area A	149- Devries SL		100.0%		3.10	3.10 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2010
Laydown Area B	149- Devries SL		100.0%		2.20	2.20 From Mike Haskell email dated 5/5/08
Laydown Area C	149- Devries SL		100.0%		1.60	1.60 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2010
Laydown Area D	149- Devries SL		100.0%		2.90	2.90 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2011
Laydown Area E	149- Devries SL		100.0%		6.10	6.10 New laydown area provided by Megan Sebra 6/16/2012
Laydown Area F	149- Devries SL		100.0%		2.60	2.60 New laydown area provided by Megan Sebra 6/16/2013
						Assumes laydown areas are completely covered (paved or gravelled) during construction.
						18.50 Revised by email from Megan Sebra June 16, 2010
Natural gas supply pipeline -trench	149- Devries SL		100.0%	14121.6	1.297	Edit from 2.5 miles based on email revision from M. Sebra on 2/6/2009. Assumes 4 foot wide trench
Natural gas supply pipeline-corridor	149- Devries SL		100.0%	14121.6	9.726	Edit from 2.5 miles based on email revision from M. Sebra on 2/6/2009. Assumes 4 foot wide trench
						11.02
						Sum 29.962 Assumed 100% exposed during construction
						Construction
						Corridor
Transmission Line Pole	149- Devries SL			0	0.0000	0.0000 Assumes no 4x4 ft holes are needed off site to connect to existing OH lines
0	sum		0	0	0.0000	0.0000
						0.0000 Assumed pole hole footprint will be unprotected until pole installed
						Construction
						Trench acres
						Corridor acres
Process water supply pipeline	-		0		0	0 Assumes on-site connection
Sewer Line	-		0		0	0 Assumes on-site connection

Attachment B

Final Memorandum Biological Resource Assessment

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Subject **Lodi Energy Center (LEC) Biological Resource Assessment, New Storage Area Project, San Joaquin County, California**

Attention Michael Fallon, Compliance Manager and Environmental Health and Safety
Northern California Power Agency, Lodi Energy Center

From Steve Long and Rick Crowe, Jacobs Engineering Group Inc. (Jacobs)

Date February 11, 2020

1. Introduction

The Northern California Power Agency, Lodi Energy Center (NCPA-LEC) is proposing to use former, temporary laydown area as a permanent storage area. The proposed permanent storage area is located on the western side of the existing NCPA-LEC site in San Joaquin County, California (Attachment 1, Figure 1). The proposed storage area was previously identified as a temporary Laydown Area F during the permitting phase for the NCPA-LEC. The laydown area was mitigated for temporary impacts but it was not utilized during LEC construction. The area is currently being used by the city of Lodi for storage of concrete conveyance materials (pipe segments and vaults).

This technical memorandum documents the results of a review of existing published biological literature available online and documents related to biological resources from licensing the power plant facility. The memorandum also summarizes the results of a biological reconnaissance survey performed on December 19, 2019 within the area proposed for the permanent storage. In addition, the memorandum provides an assessment of potential impacts to biological resources associated with the project and recommends best management practices for avoiding impacts to biological resources.

Attachments to this technical memorandum include:

- Attachment 1 – Figures
- Attachment 2 – Special-Status Species and Biological Resources Summary Tables
- Attachment 3 – Photographs

2. Project Description

The NCPA-LEC is proposing to create a permanent storage area on the west side of their current plant facilities. The project site is located within the U.S. Geological Survey (USGS) 7.5-minute Terminous quadrangle in Sections 23 and 24, Township 03 North, Range 05 East, Mount Diablo Meridian.

The proposed permanent storage area is bounded on the north by an irrigated agricultural field and the southwest corner of the City of Lodi WWTF ponds. The eastern boundary of the proposed storage area is comprised of an electrical switchyard and the northwestern corner of the NCPA-LEC property. The southern boundary of the proposed storage area lies about 200 feet to the north of an irrigation canal that drains west into White Slough (Attachment 1, Figure 4).

Construction vehicles for the permanent storage area would access the site from the northwest corner of the NCPA-LEC site. The storage site is nearly level but limited grading would be used to create level placement areas and internal access roadways for Conex containers and open storage areas that would be used for secure storage of materials to be used for operations and maintenance of the NCPA-LEC. The existing paved access route connecting from the northwest corner of the NCPA-LEC site would be linked to newly created internal roadways that would be compacted and covered with gravel to allow for year-round use.

At completion, the approximate 2.323-acre storage area would be protected with a permanent fence around the perimeter.

3. Methods

CH2M HILL Engineers, Inc., now Jacobs Engineering Group Inc. (Jacobs), conducted a review of publicly available data pertaining to special-status species, including federal- and state-listed (endangered, threatened, candidate, or proposed) species, Migratory Bird Treaty Act (MBTA) species, and California species of special concern. This review also included a query for designated or proposed critical habitat for federally listed species. To assess existing biological conditions and project permit requirements, the following activities were conducted:

- Review of USGS topographic maps, National Hydrography Dataset (USGS, 2020), and U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (USFWS, 2020a) maps in the vicinity for assessing presence of mapped aquatic resources (Attachment 1, Figure 2)
- Review of publicly available data sets for identifying the potential presence of sensitive biological resources, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW, 2019) within 2 miles of the proposed project (Attachment 1, Figure 2) and the USFWS Information, Planning, and Consultation system (USFWS, 2020b), for the survey area.
- Review also included previous environmental documents associated with construction permitting for the NCPA-LEC.
- Site visit and biological reconnaissance survey on December 19, 2019

Jacobs biologists Steve Long and Rick Crowe conducted a reconnaissance-level assessment of the proposed permanent storage area and adjacent areas to the south on December 19, 2019, to identify sensitive biological resources including regulated aquatic resources and potential habitat for special-status species.

Potential aquatic resources were assessed in proximity to the nearest anticipated construction activities and access route. An east-west oriented drainage ditch occurs approximately 180 feet south from the proposed storage area, north of the irrigation canal. Bank geometry and dominant vegetation characteristics at an observation point within the drainage ditch channel were noted at approximately 440 feet west of the existing access roadway crossing (see Attachment 1, Figure 4).

Potential habitat for special status species (especially giant garter snake [*Thamnophis gigas*]) was assessed by looking for evidence of burrows or other areas that could serve as hibernacula. Evidence of bird-nesting activity and sites within or adjacent to the storage area was also sought during the December site visit; however, the timing of this visit after the nesting season was not ideal for this activity.

Representative site photographs were taken and are included in Attachment 3.

4. Landscape Setting and Existing Conditions

The proposed project is located within the Sodic Claypan Terraces subsection (262Aj) of the Great Valley ecological subregion (Miles and Goudey, 1997). This subsection contains nearly level to gently sloping

alluvial fans from the southern end of the northern California Coast ranges. Streams in this subsection drain to the Sacramento River through man-made and natural channels.

The proposed project is within the Lower Mokelumne River hydrologic unit (Hydrologic Unit Code 1804001211). In the project area, drainage flows generally westward through man-made canals associated with irrigated agricultural areas that occur to the north, west, and south of the proposed storage area. The largest of these drainage features is an irrigation canal that flows from east to west to the south of the NCPA-LEC property and connects with the natural waterway, White Slough, approximately 1.5 miles west of the southwest corner of the NCPA-LEC property, near the transition to the Delta ecological subsection.

5. Results

The document review identified state- and federal-listed species with some potential to occur within or adjacent to the project area (Attachments 2a and 2b). Attachment 2a provides a list of the CNDDDB occurrences within 2 miles of the Proposed Storage Area and access route. Attachment 2b provides a list of Federally protected species and Critical Habitats associated with the project area. Site photographs are included in Attachment 3.

National Wetlands Inventory (USFWS, 2020a) and National Hydrography Dataset (USGS, 2020) identified a number of man-made irrigation/drainage features within the survey area. The largest of these features is the east-west flowing irrigation canal to the south of the NCPA-LEC site. This irrigation ditch drains west about 1.5 miles and joins with the natural waterway, White Slough within the Sacramento-San Joaquin River Delta (Attachment 1, Figure 3).

Attachment 2a shows nine state-listed or sensitive species that have occurrences recorded in the CNDDDB within 2 miles of the project area and include: two reptiles: giant garter snake (*Thamnophis gigas*) and western pond turtle (*Emys marmorata*); one crustacean: vernal pool tadpole shrimp (*Lepidurus packardii*); two flowering plants: woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*) and Mason's lilaeopsis (*Lilaeopsis masonii*); and four bird species: Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), California black rail (*Laterallus jamaicensis coturniculus*), and song sparrow [Modesto population] (*Melospiza melodia*) (CDFW 2019).

Attachment 2b shows ten federally listed species that include: one mammal, riparian brush rabbit (*Sylvilagus bachmani riparius*); one reptile, giant garter snake; two amphibians: California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*); one fish: Delta smelt (*Hypomesus transpacificus*); two insects: San Bruno Elfin butterfly (*Callophrys mossii bayensis*) and Valley elderberry longhorn beetle (*Desmocerus californicus*); two crustaceans: vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp; and one flowering plant: large-flowered fiddleneck (*Amsinckia grandiflora*). Attachment 2a also lists 16 bird species that could occur in the project area at various times during the year and that would be protected under the Migratory Bird Treaty Act. In addition, the project area overlaps the designated federal Critical Habitat for Delta smelt (USFWS, 2020b).

The proposed storage area consists of graded, open space to the west of the NCPA-LEC switchyard. The area will be accessed during construction from the northwest corner of the NCPA-LEC property. Approximately 180 feet south of the southern boundary of the proposed storage area there is a drainage ditch with an unpaved access roadway along its southern side. The drainage ditch passes through a culverted crossing where an unpaved access roadway leads north in the direction of the proposed storage area. The proposed storage area (Attachment 1, Figure 4) is a minimum distance of 200 feet north of the southern irrigation canal to provide an avoidance buffer for giant garter snake habitat.

The eastern portion of the proposed storage area is currently being used for material storage (i.e., concrete pipe segments and vaults) whose source was not determined. There are large electrical transmission towers to the north and south of the proposed storage area and the associated overhead transmission lines that run in a roughly north-northwest/south-southeast alignment (see Attachment 1, Figures 1 and 4). The lowest part of the overhead transmission line sag occurs above the proposed storage area near the stored concrete pipe segments.

There was evidence of recent filling and grading along the northern margin of the proposed storage area. The area to the west of the north-south access roadway had a large area showing freshly emerging herbaceous plants that indicated that an earlier filling and grading likely occurred in those areas in addition to the recent grading. It was reported that this ruderal agricultural area is routinely disked or mowed for fire suppression. The original Laydown Area F (and the currently proposed storage area) are located just north and outside of the 200-foot buffer associated with giant garter snake upland habitat that was identified as part of the LEC permitting process (CH2M HILL, 2009).

The vegetation community in the proposed storage area is characterized by an annual grassland that is dominated by dense patches of invasive or naturalized plants that include milk thistle (*Silybum marianum*) in the easternmost portion and also scattered throughout the remaining portions of the area. Other dominant plants included red-stemmed filaree (*Erodium cicutarium*); soft chess (*Hordeum murinum*); wild rye (*Festuca perrenis*); Johnson grass (*Sorghum halepense*); mustard (*Brassica rapa*); yellow star-thistle (*Centaurea solstitialis*), and Italian thistle (*Carduus pycnocephalus*).

No tree or shrub species are present in the proposed storage area. There are larger trees found to the south and east of the NCPA-LEC property that were associated with the margins of the irrigation canal. There were patches of smaller shrubs (willows) within the drainage ditch. There was no evidence of seasonal ponding or vernal pools observed in proximity to the proposed storage area.

Wildlife observed using the proposed area and the immediate surroundings consisted of an American white pelican (*Pelecanus erythrorhynchos*) carcass, black phoebe (*Sayornis nigricans*) foraging, white-tailed kite (*Elanus leucurus*) foraging, great egret (*Ardea alba*) foraging, house sparrow (*Passer domesticus*) fly over, Canada goose (*Branta canadensis*) fly over, coyote (*Canis latrans*) scat, raccoon (*Procyon lotor*) scat, California meadow vole (*Microtus californicus*) ground disturbance and California ground squirrel (*Otospermophilus beecheyi*) burrows. There were several ground squirrel burrows observed within the proposed storage area and there were several small sink-hole like depressions that are believed to be ground squirrel burrows that were enlarged by water flowing through them. These larger holes could provide potential, short-term wildlife cover where they occur along the northeastern margin of the proposed storage area (i.e., just west of the NCPA-LEC switchyard). In addition, the presence of the concrete pipe segments provides potential shelter for wildlife within the proposed storage area.

Based on these observations, it was concluded that the proposed storage area did not have suitable habitat for any of the listed federal or state-listed species noted above. More suitable special-status species habitat does occur, however, along the areas approximately 180 to 230 feet south from the southern margin of the proposed storage area and in the more remote delta areas to the west. For example, Swainson's hawk nesting has been noted in the large native trees to southeast of the NCPA-LEC property and along the large canal to the west of the project area (Attachment 1, Figure 3). While the CNDDB mapping indicates giant garter snake habitat extending from the western edge of the proposed storage area, the closer potential habitat for that species is the southern irrigation canal that connects to White Slough. As previously mentioned, this is the reason the proposed storage area is located at least 200 feet north of the irrigation canal.

As part of construction permitting for the LEC project, wetland conditions were assessed for proposed project areas including Laydown Area F, which roughly corresponds to the proposed storage area location (CH2M HILL 2009. Technical Memorandum, Lodi Energy Center – Wetland Concerns. January 9). This memorandum identified the irrigation canal and man-made ponds in the project vicinity as wetlands or waters of the United States and also collected wetland criteria (vegetation, soil, and hydrology) at three data points along the drainage ditch along the south side of the proposed LEC and existing switchyard and concluded that all three of these locations were in non-wetlands. It should be noted that the lowest (downstream) location of these sample points, SP-02, was approximately 1,000 feet east (upstream) from the Observation Point made during the December 19, 2019 site visit.

The Observation Point shown on Attachment 1, Figure 4 was located within the drainage ditch just beyond the western edge of the proposed storage area. At this location, the ditch bank rises steeply about 6 feet from the ditch bottom to the existing unpaved roadway. The northern bank at this location

risers more gradually and is obscured by recent grading just outside of the ditch. The Ordinary High Water Mark (OHWM) at this location was indicated by a clear transition from wetland plants in the bottom to upland plants on the bank. The OHWM channel itself was approximately 17 feet wide and 1.5 feet deep at the Observation point.

The presence of dense shining flat-sedge (*Cyperus eragrostis*), a FACW (facultative wetland) plant at the Observation Point location likely indicates that the lower, western portion of the drainage ditch is inundated for considerable periods and may possibly satisfy criteria for wetland conditions. However, because this ditch is approximately 180 feet from the proposed storage area and would not be affected by proposed activities, a more detailed wetland investigation is not warranted. It should be noted however, that the drainage ditch area and portions of the open land to the north may be subjected to periodic, seasonal winter flooding from the Sacramento River delta areas from the west.

6. Recommendations/Mitigation

6.1 Special-Status Reptiles

Potentially suitable habitat is present for giant garter snake within the south irrigation canal which is 200 feet south of the proposed storage area. Because the proposed storage area is located 200 feet from the potential snake habitat within the irrigation canal, it is expected that the probability for this species to occur there is minimal, however standard giant garter snake measures will be followed.

- Construction activities, especially earth moving, should be scheduled during the giant garter snake active season (roughly April 15 to November 1) to avoid the possibility of inadvertently harming snakes while they are in underground winter retreats.
- Pre-construction surveys should be conducted immediately before construction startup by a qualified biologist.
- A Worker Environmental Awareness Training (WEAT) should be conducted for all construction workers. The WEAT will be given by the qualified biologist that is familiar with site conditions. The WEAT information will include the snake's protected status, identifying characteristics, and relevant avoidance measures specific to the proposed activities and local conditions. Participation in the WEAT will be documented with sign-in sheets. All new construction personnel will be required to review relevant WEAT materials before signing off on completion.
- Should any snakes be encountered in the area during construction, construction staff should notify the project biologist in order to develop an appropriate response. The biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current USFWS recovery permits pursuant to section 10(a)1(A) of the Endangered Species Act (ESA).
- The biologist shall be required to report any incidental take to the U.S. Fish and Wildlife Service immediately by telephone at (916) 414-6600 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.
- Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance. Vehicle speeds should be kept below 15 miles per hour on unpaved roadways in the project area, especially along the southern access roadway.
- After completion of construction activities, any temporary fill and construction debris shall be removed. Final site conditions should be documented with a photographic and written record.

6.2 Special-Status Bird Species

Potentially suitable nesting habitat is present for birds protected under MBTA. The following measures are recommended to avoid impacts to nesting migratory birds:

- If possible, schedule construction activities to occur outside of the nesting season (February 1 to September 15).
- If construction activities are scheduled to occur during the nesting season, then preconstruction nesting bird surveys should be conducted by a qualified biologist within 14 days of construction, covering a radius of 0.25 mile for Swainson's hawk, 250 feet for non-listed raptors, and 100 feet for non-listed passerines. Periodic nesting surveys or monitoring during construction may be required if nesting Swainson's hawks are found within 0.25 mile of the survey area to ensure that construction activities have no adverse effect.
- If active nests are identified during the preconstruction survey, then the biologist should evaluate whether existing screening buffers (such as buildings, trees, and intervening topography) are sufficient to allow work to proceed and/or determine what level of work exclusion buffers or nest monitoring is needed. This could result in work areas being reduced in size.
- If work cannot proceed without disturbing nesting birds, or if signs of disturbance are observed by the monitor, then work may be halted or redirected to other areas until nesting and fledging are complete or until the nest has otherwise become inactive.

6.3 Mitigation

Mitigation for the loss of Swainson's hawk foraging habitat is required under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) that is administered by the San Joaquin Council of Governments (SJCOG). It was required for the use of Laydown Area F (2.6-acres) during the construction of LEC (CH2M HILL 2009) and the fee rate was based upon the loss of agricultural land.

This current memorandum assumes the same mitigation requirement for the permanent loss of agricultural land that is associated with the proposed storage area based on email communications with Mr. Steve Mayo, Senior Habitat Planner with San Joaquin Council of Governments (SJCOG) (Mayo 2020). The 2020 SJCOG habitat fee structure shows the mitigation fee for loss of agricultural habitat to be \$12,822.00 per acre. Therefore, the total mitigation fee for the loss of 2.323-acres of agricultural land associated with the proposed storage areas would be \$29,785.51.

7. References

CDFW (California Department of Fish and Wildlife). 2020. California Natural Diversity Database. Accessed December 2109. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.

CH2M HILL 2009. Technical Memorandum by Rick Crowe and Russell Huddleston, Biologists, Lodi Energy Center- Proposed Mitigation Measures for Special-Status Species and Variance Request for Giant Garter Snake Upland Habitat through the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, dated 09/30/09.

Mayo, Steve. 2020. Senior Habitat Planner, San Joaquin Council of Governments. Email communications with Rick Crowe of Jacobs. January 27, 2020.

Miles, Scott, and Charles Goudey, eds. 1997. *Ecological Subregions of California*. United States Department of Agriculture, Forest Service. Pacific Southwest Division. R5-EM-TP-005-Net. San Francisco.

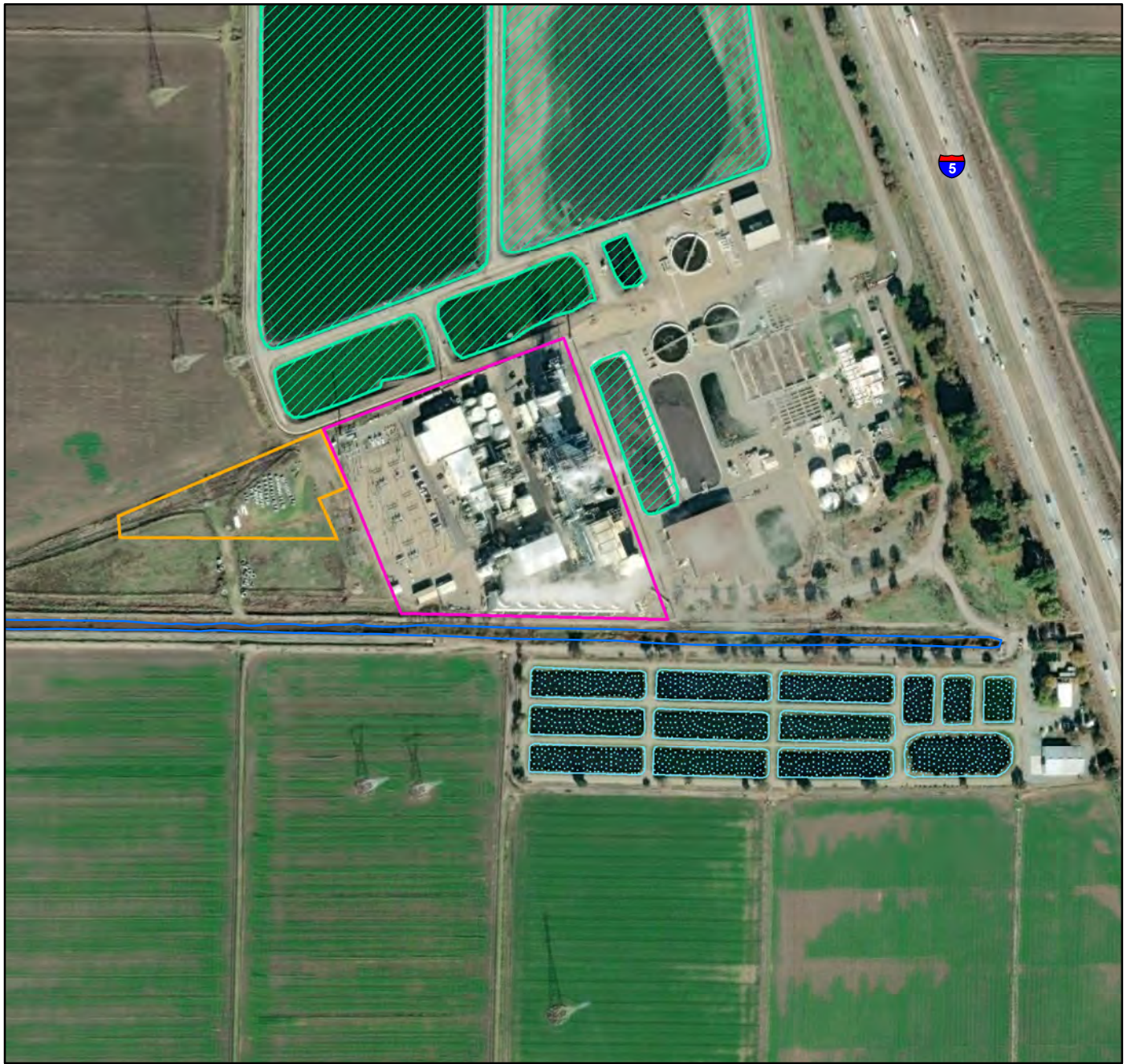
USFWS (U.S. Fish and Wildlife Service). 2020a. National Wetlands Inventory Data. Accessed January 21, 2020. <https://www.fws.gov/wetlands/data/data-download.html>.

USFWS (U.S. Fish and Wildlife Service). 2020b. Information for Planning and Consultation. Accessed January 23, 2020. <http://ecos.fws.gov/ipac/>.

USGS (U.S. Geological Survey). 2020. High Resolution National Hydrography Dataset (NHD) Home page. GIS data. Accessed January 21, 2020. <http://nhd.usgs.gov/>.

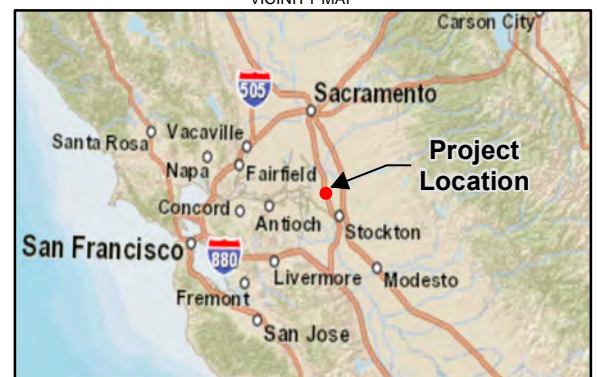
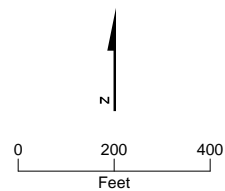
Attachment 1

Figures



VICINITY MAP

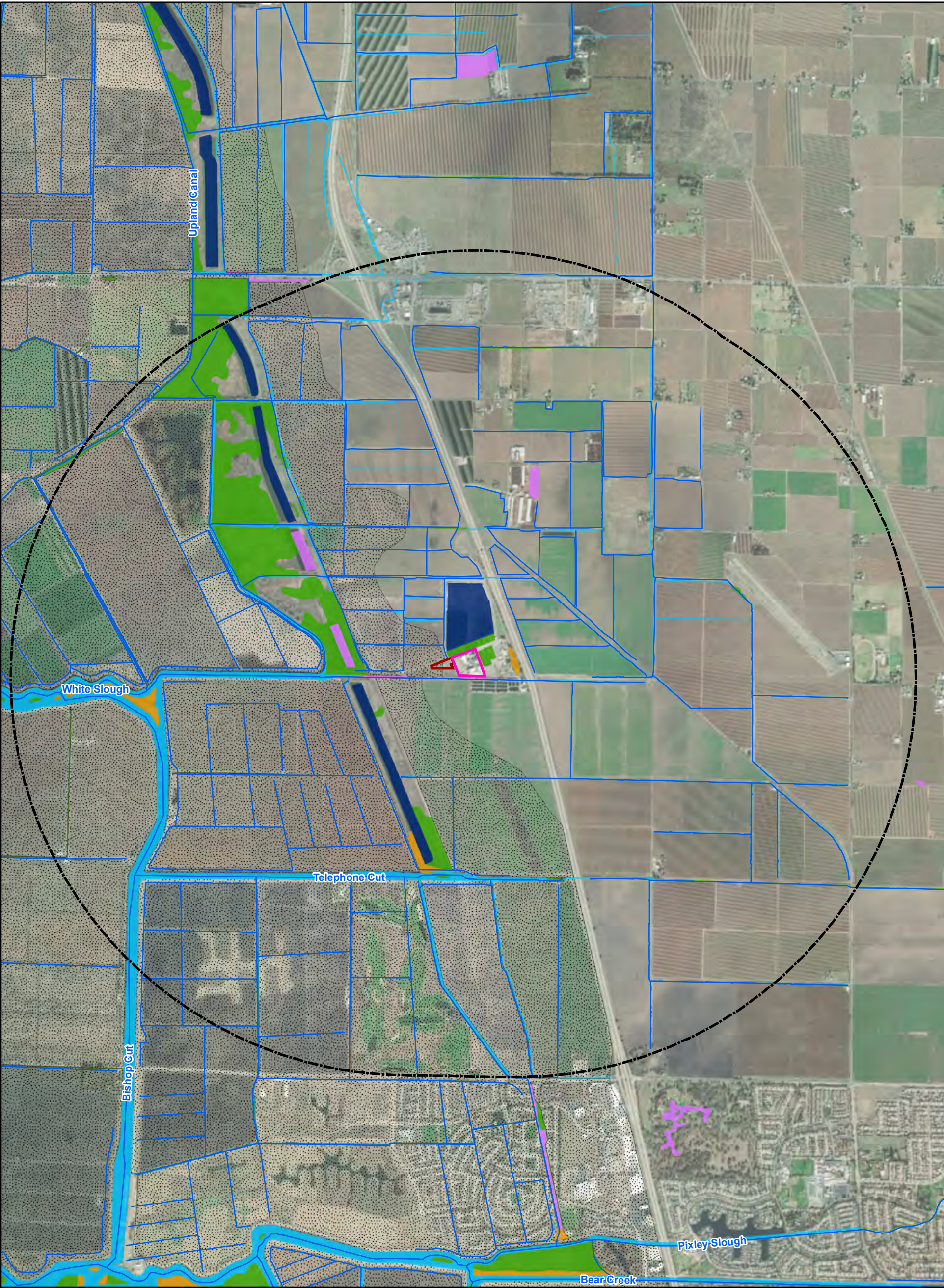
- NCPA-LEC
- Irrigation Canal
- Waste Water Treatment Facility Pond
- Vector Control Pond
- Proposed Storage Area



Source:
Irrigation Canal and man-made ponds; Lodi Energy Center - Wetland
Concerns, Technical Memorandum, CH2M HILL. January 9, 2000

Note:
This map was compiled from various scale source data and maps and is intended
for use as only an approximate representation of actual locations.

FIGURE 1
NCPA - Lodi Energy Center and Proposed Storage Area
NCPA - Lodi Energy Center
Lodi, California



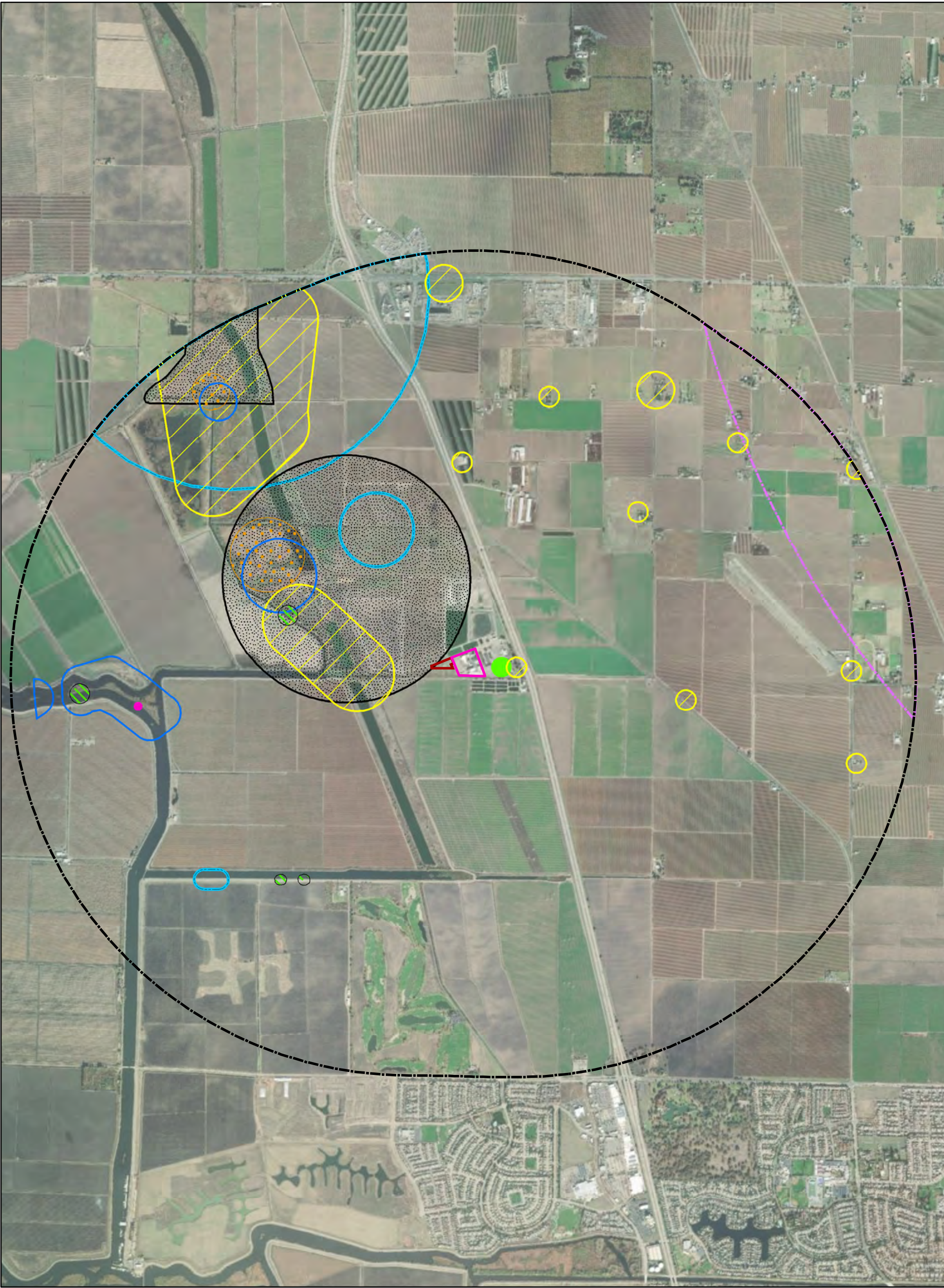
Legend

	Project Area		Freshwater Pond
	NCPA-LEC		Lake
	2-mile Buffer		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		NHD Flowline

Note:
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

NWI, <https://www.fws.gov/wetlands/data/>, accessed April 2019
NHD, <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>, accessed January 2016

FIGURE 2
National Wetland Inventory and National Hydrographical Dataset
NCPA - Lodi Energy Center
Lodi, California



Legend

Project Area	giant gartersnake
NCPA-LEC	song sparrow ("Modesto" population)
2-mile Buffer	vernal pool tadpole shrimp
California black rail	western pond turtle
Mason's lilaeopsis	white-tailed kite
Swainson's hawk	woolly rose-mallow

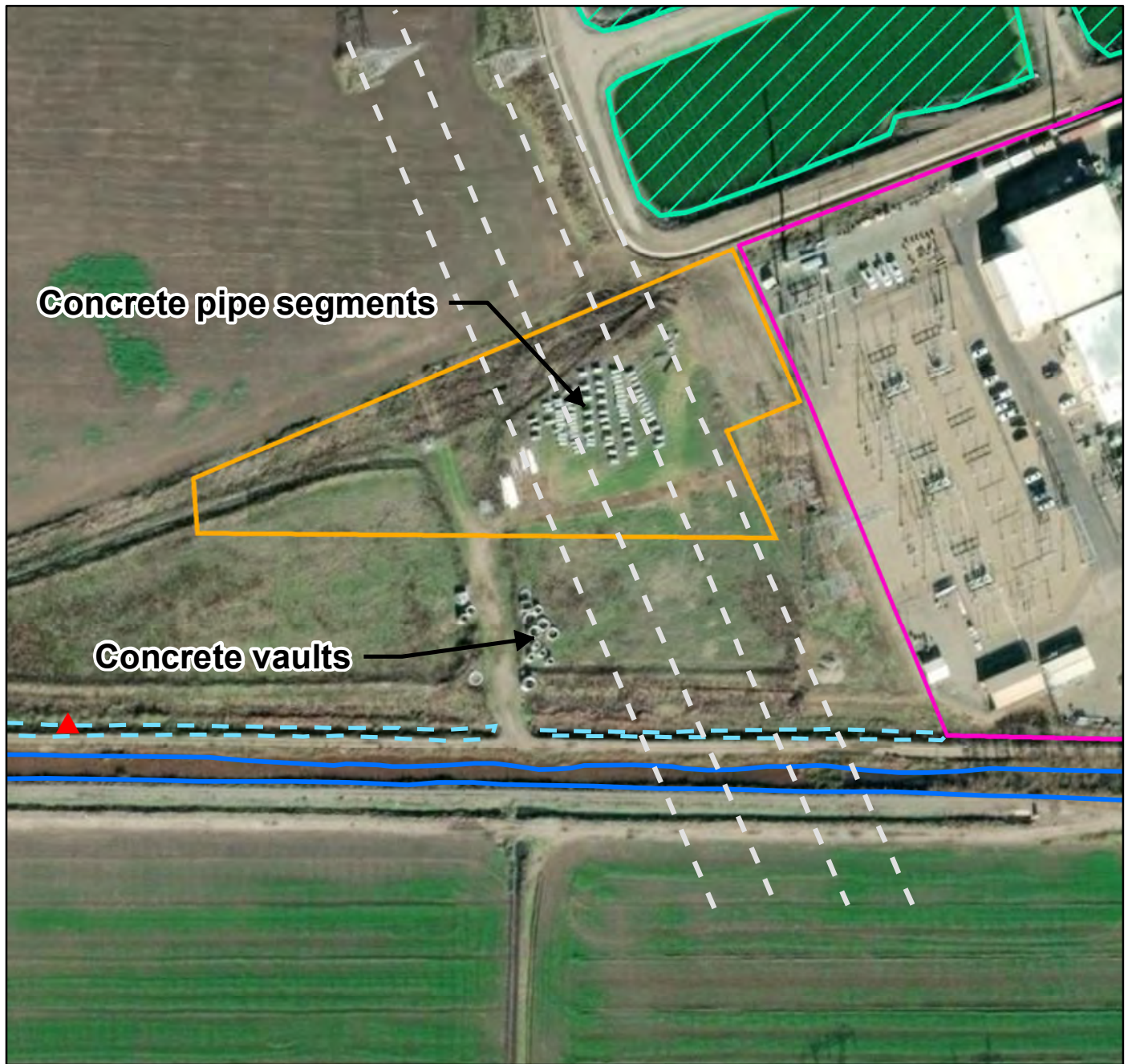
Note:
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CNDDDB, <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>, accessed Dec 2019.

0 1,250 2,500
Feet

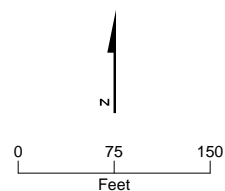
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FIGURE 3
California Natural Diversity Data Base
NCPA - Lodi Energy Center
Lodi, California



VICINITY MAP

- NCPA-LEC
- Drainage Ditch
- Irrigation Canal
- Waste Water Treatment Facility Pond
- Proposed Storage Area
- Overhead Transmission Lines
- ▲ Observation Point



Source:
Irrigation Canal and man-made ponds, Waste Water Treatment Plant Pond; Lodi Energy Center -
Wetland Concerns, Technical Memorandum, CH2M HILL. January 9, 2000

Note:
This map was compiled from various scale source data and maps and is intended
for use as only an approximate representation of actual locations.

These overhead power line locations are approximate as shown based on aerial imagery interpretation.

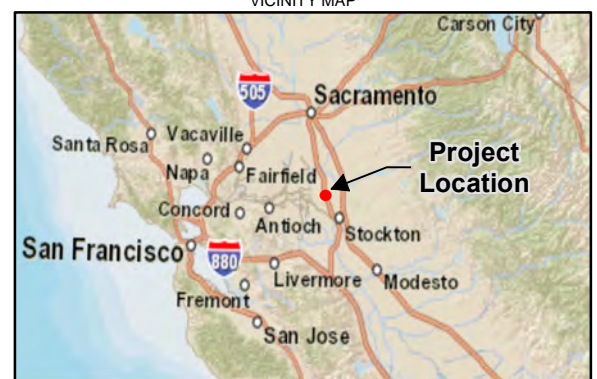


FIGURE 4
Proposed Storage Area
NCPA - Lodi Energy Center
Lodi, California

Attachment 2
Special-Status Species Table and
Biological Resources Summary Tables

Table 2a. California Natural Diversity Database Occurrences within 2 Miles of Proposed Storage Area

SNM	ONM	OCNUMBER	QUADNAME	KEYCOUNT	PLS	ELEVATION	PARTS	ELMTYPE	TAXONGROUP	ECOUNT	ACCURACY	PRESERVE	OCCTYPE	OCCKRANK	SENSITIVE	SITEDATE	ELMDATE	FEDLIST	CALLIST	GRANK	BRANK	RPLANK	TRANK	CPWSTATUS	OTHERSTATUS	LOCATION	LOCDETAILS		
Lepidurus packardii	vernal pool tadpole shrimp	210	Lodi North	3	JQ	TO3N, RO5E, Sec. 01 (M)	50	1	2	Crustaceans	1.5 miles	Presumed Extant	Natural/Native occurrence	Unknown	N	19900410	19900410	Endangered	None	G4	3354				IUCN, EN	LODI	COLDAN MARSH, 0.8 MILE WEST OF THORNTON ROAD AT HIGHWAY 12.	NO OTHER LOCATION INFORMATION GIVEN.	
Emys marmorata	western pond turtle	68	Terminus	3	JQ	TO3N, RO5E, Sec. 15 (M)	3	1	2	Reptiles	1.1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	XXXXXXX	XXXXXXX	None	None	G3G4	53			SSC	BLM, S; IUCN, VU; USFWS, S			ABOUT 1.5 MILES S OF HWY 12 AT I-5 JUNCTION, 2 MILES SE OF HWY 10 AND 8 ROAD RD JUNCTION, WHITE SLOUGH, 1 M W THORNTON RD., 1.5 M S HWY 12" (1995), AND "WHITE S SLOUGH WILDLIFE AREA, SAN JOAQUIN CO." (1995). FROM SHAFFER OF BAY DELTA CONSERVATION PLAN ENVIRONMENTAL SURVEY DATA 2009-2010. UP TO 4 DISCRETE NESTING SITES PER DWR. FROM SHAFFER OF BAY DELTA CONSERVATION PLAN ENVIRONMENTAL SURVEY DATA 2009-2010. UP TO 4 DISCRETE NESTING SITES RECORDED.	
Thamnophis gigas	giant gartersnake	50	Terminus	3	JQ	TO3N, RO5E, Sec. 23 (M)	10	1	2	Reptiles	1.35 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19820526	19820526	Threatened	Threatened	G2	52				IUCN, VU			MAPPED TO PROVIDED COORDINATES & LOCATION DESCRIPTION OF "COLDAN MARSH" AND POND IN COLDAN MARSH NOT LABELED ON USGS TOPO. LOCATED ALONG UPLAND CANAL ON N EDGE OF SHN KEE TRACT. MAP FROM CA DWF USED TO DETERMINE MARSH BOUNDARIES.	
Buteo swainsoni	Swainson's hawk	1824	Terminus	3	JQ	TO3N, RO5E, Sec. 14 (M)	0	1	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			COLDAN MARSH, 0.8 M W OF THORNTON ROAD AT HWY 12. WHITE SLOUGH WILDLIFE AREA, 7.8 M WSW OF LOD POST OFFICE.	
Thamnophis gigas	giant gartersnake	49	Terminus	3	JQ	TO3N, RO5E, Sec. 15 (M)	3	1	2	Reptiles	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Good	N	20100923	20100923	Threatened	Threatened	G2	52				IUCN, VU				
Melospiza melodia	song sparrow ("Modesto" population)	24	Terminus	3	JQ	TO3N, RO5E, Sec. 28, N (M)	0	3	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC				MAPPED TO PROVIDED COORDINATES. DWR DETERMINED DETECTIONS WERE FOR "MODESTO" POPULATION BASED ON LOCATION. ONLY BIRDS WITH NESTING BEHAVIOR WERE MAPPED.	
Buteo swainsoni	Swainson's hawk	1822	Terminus	3	JQ	TO3N, RO5E, Sec. 23, SW (M)	0	1	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090423	20090423	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			ALONG WHITE SLOUGH, JUST N OF KING ISLAND, 3 MILES WSW OF LOD. WHITE SLOUGH WILDLIFE AREA, ABOUT 2 MILES S OF HWY 12 AT I-5 AND 2.5 MILES W OF N DEVRIES RD AT W ARMSTRONG RD.	
Laterallus jamaicensis coturniculus	California black rail	10	Terminus	3	JQ	TO3N, RO5E, Sec. 23, NW (M)	0	1	2	Birds	1.5 mile	Presumed Extant	Natural/Native occurrence	Good	N	20090521	20090521	None	Threatened	G3G4T1	51			FP	BLM, S; IUCN, NT; NABCI, RWL; USFWS, BCC			WHITE SLOUGH WILDLIFE AREA, APPROXIMATELY 1.5 M SSW OF I-5 AT HWY 12, NW OF STOCKTON.	
Melospiza melodia	song sparrow ("Modesto" population)	25	Terminus	3	JQ	TO3N, RO5E, Sec. 23, W (M)	0	1	2	Birds	1.5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC				MAPPED TO PROVIDED COORDINATES. DWR DETERMINED DETECTIONS WERE FOR "MODESTO" POPULATION BASED ON LOCATION. ONLY BIRDS WITH NESTING BEHAVIOR WERE MAPPED.	
Emys marmorata	western pond turtle	69	Terminus	3	JQ	TO3N, RO5E, Sec. 23, NW (M)	4	1	2	Reptiles	1.5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	XXXXXXX	XXXXXXX	None	None	G3G4	53			SSC	BLM, S; IUCN, VU; USFWS, S			WHITE SLOUGH WILDLIFE AREA, ABOUT 1.5 MI SSW OF I-5 AT HWY 12, 7.5 MI WSW OF LOD. 1.5 MILES SOUTH OF HIGHWAY 12 X THORNTON ROAD, 0.5 MILE EAST OF W. SLOUGH.	
Laterallus jamaicensis coturniculus	California black rail	297	Terminus	3	JQ	TO3N, RO5E, Sec. 15, SE (M)	2	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20100326	20100326	None	Threatened	G3G4T1	51			FP	BLM, S; IUCN, NT; NABCI, RWL; USFWS, BCC			ABOUT 0.8 MI SW OF I-5 AND HWY 12 INTERSECTION. N END OF SHN KEE TRACT, NW OF STOCKTON.	
Buteo swainsoni	Swainson's hawk	2291	Lodi South	3	JQ	TO3N, RO5E, Sec. 18, SW (M)	15	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	2003XXXX	2003XXXX	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			EAST SIDE OF RAY ROAD, JUST NORTH OF THE KINGDON ROAD INTERSECTION, ABOUT 3.5 MILES WEST OF LOD.	
Melospiza melodia	song sparrow ("Modesto" population)	26	Terminus	3	JQ	TO3N, RO5E, Sec. 15, SE (M)	0	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC				MAPPED TO PROVIDED COORDINATES. DWR DETERMINED DETECTIONS WERE FOR "MODESTO" POPULATION BASED ON LOCATION. ONLY BIRDS WITH NESTING BEHAVIOR WERE MAPPED.	
Buteo swainsoni	Swainson's hawk	1191	Terminus	3	JQ	TO3N, RO5E, Sec. 14 (M)	10	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20000602	20000602	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			ALONG HIGHWAY 12, 0.3 MILE EAST OF THORNTON ROAD, EAST OF I-5, 7 MILES NW OF STOCKTON.	
Emys marmorata	western pond turtle	515	Terminus	3	JQ	TO3N, RO5E, Sec. 27 (M)	5	1	2	Reptiles	1 specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19990805	19990805	None	None	G3G4	53			SSC	BLM, S; IUCN, VU; USFWS, S			SOUTH SIDE OF TELEPHONE CUT, IN THE NW CORNER OF BISHOP TRACT, 1.1 MILES NW OF	
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	166	Terminus	3	JQ	TO3N, RO5E, Sec. 28, NE (M)	5	1	1	Dicots	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20050825	20050825	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG			LARGE LOW ISLAND IN THE EAST HALF OF WHITE SLOUGH, ABOUT 0.3 MILE WEST OF CONFLUENCE WITH BISHOP CUT.	MAPPED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 28 ACCORDING TO 2005 VEGMAP COORDINATES.	
Buteo swainsoni	Swainson's hawk	1648	Lodi South	3	JQ	TO3N, RO6E, Sec. 18, SW (M)	18	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			WEST SIDE OF REELY ROAD, 0.2 MILE SOUTH OF KINGDON ROAD, WEST OF LOD.	
Sturnus fuscus	white-tailed kite	150	Terminus	3	JQ	TO3N, RO5E, Sec. 24, SW (M)	5	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20080430	20080430	None	None	G5	3354			FP	BLM, S; IUCN, LC			SOUTH SIDE OF THE CITY OF LOD'S WHITE SLOUGH WATER POLLUTION CONTROL FACILITY ADJACENT TO I-5, 2 MI SOUTH OF HWY 12.	MAPPED TO PROVIDED COORDINATES AS NA063.
Buteo swainsoni	Swainson's hawk	583	Lodi South	3	JQ	TO3N, RO6E, Sec. 30, NW (M)	10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020711	20020711	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			EAST SIDE OF THORNTON ROAD, 1 MILE WEST OF THE DEVRIES ROAD INTERSECTION WITH ARMSTRONG ROAD, 6 MILES SW OF LOD.	
Buteo swainsoni	Swainson's hawk	1644	Lodi South	3	JQ	TO3N, RO6E, Sec. 19, SE (M)	17	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			WEST SIDE OF DEVRIES ROAD, 0.06 MILE NORTH OF THE ARMSTRONG ROAD JUNCTION, 5 MILES SW OF LOD.	
Buteo swainsoni	Swainson's hawk	1825	Terminus	3	JQ	TO3N, RO5E, Sec. 13, SW (M)	10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20090701	20090701	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			WEST SIDE I-5, JUST W OF N THORNTON ROAD ABOUT 0.4 MILE S OF W KINGDON RD INTERSECTION & 6.5 MI SE OF LOD POST OFFICE.	MAPPED TO PROVIDED COORDINATES.
Buteo swainsoni	Swainson's hawk	1639	Terminus	3	JQ	TO3N, RO5E, Sec. 13, SW (M)	16	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			NORTH SIDE OF KINGDON ROAD, 0.5 MILE WEST OF RAY ROAD, 5 MILES WSW OF LOD.	
Buteo swainsoni	Swainson's hawk	1638	Lodi South	3	JQ	TO3N, RO6E, Sec. 17, SW (M)	22	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			EAST SIDE OF DEVRIES ROAD, <1 MILE NORTH OF THE DEVRIES ROAD/HANNET ROAD INTERSECTION, 4 MILES SW OF LOD.	
Buteo swainsoni	Swainson's hawk	1637	Lodi South	3	JQ	TO3N, RO5E, Sec. 24, NE (M)	15	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			0.1 MILE NW OF THE INTERSECTION OF RAY ROAD AND TREDWAY ROAD, 5 MILES SW OF LOD.	
Buteo swainsoni	Swainson's hawk	1823	Terminus	3	JQ	TO3N, RO5E, Sec. 24, SW (M)	10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20090701	20090701	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			WHITE SLOUGH WATER POLLUTION CONTROL PLANT, W SIDE OF I-5 ABOUT 0.6 MILE SOUTH OF UNDERPASS AT N THORNTON ROAD.	MAPPED TO COORDINATES GIVEN ON FIELD SURVEY FORM.
Buteo swainsoni	Swainson's hawk	819	Lodi South	3	JQ	TO3N, RO6E, Sec. 29, SW (M)	15	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20010628	20010628	None	Threatened	G5	53				BLM, S; IUCN, LC; USFWS, BCC			EAST SIDE OF DEVRIES ROAD, 0.4 MILE NORTH OF THE INTERSECTION OF THORNTON ROAD, NORTH OF STOCKTON.	NEST TREE IS LOCATED JUST OFF DE VRIES ROAD AT AN ABANDONED HOUSE AT 11800 DE VRIES ROAD, LOD.
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	97	Terminus	3	JQ	TO3N, RO5E, Sec. 23 (M)	0	1	1	Dicots	1.80 meters	Presumed Extant	Natural/Native occurrence	Good	N	19880203	19880203	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG			EAST SHORE OF THE UNNAMED SLOUGH WHICH BORDERS THE EAST SIDE OF SHN KEE TRACT.	SITE IS MAPPED ABOUT 2 KM NORTH OF TELEPHONE CUT AND 1200 METERS WEST OF THE WHITE SLOUGH WATER POLLUTION CONTROL PLANT.	
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	133	Terminus	3	JQ	TO3N, RO5E, Sec. 36, NW (M)	0	2	1	Dicots	1 specific area	Presumed Extant	Natural/Native occurrence	Good	N	19990805	19990805	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG			NORTH SIDE OF BISHOP TRACT, TELEPHONE CUT ABOUT 0.7 MILE EAST OF BISHOP CUT.	NEAR THE BASE OF A LEVEE.	
Lilaeopsis masoni	Mason's lilaeopsis	200	Terminus	3	JQ	TO3N, RO5E, Sec. 27, NW (M)	5	1	1	Dicots	1 specific area	Presumed Extant	Natural/Native occurrence	Poor	N	20090824	20090824	None	Rare	G2	52	18.1						NEAR JUNCTION OF WHITE SLOUGH AND BISHOP CUT, NW OF STOCKTON.	

Source: California Department of Fish and Wildlife / California Natural Diversity Database, Accessed January 22, 202

Source: California Department of Fish and Wildlife, California Natural Diversity Database, Accessed January 22, 201

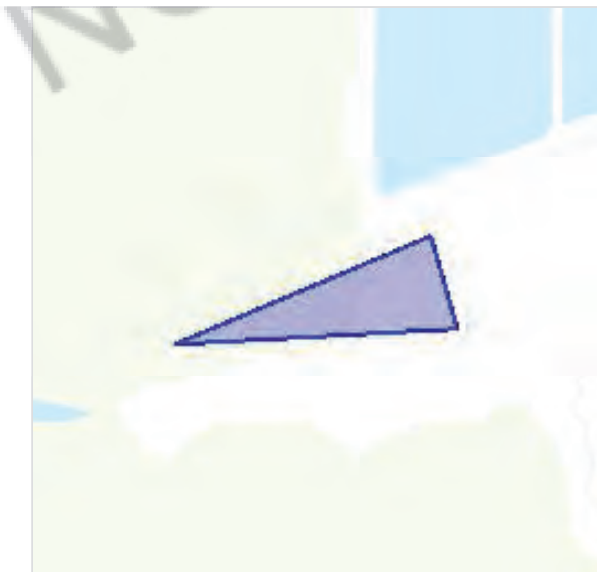
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Joaquin County, California



Local office

San Francisco Bay-Delta Fish And Wildlife

☎ (916) 930-5603

📠 (916) 930-5654

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

[http://kim_squires@fws.gov](mailto:kim_squires@fws.gov)

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Riparian Brush Rabbit <i>Sylvilagus bachmani riparius</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6189	Endangered

Reptiles

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

Amphibians

NAME	STATUS
------	--------

California Red-legged Frog *Rana draytonii*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

California Tiger Salamander *Ambystoma californiense*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2076>

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/321>

Insects

NAME

STATUS

San Bruno Elfin Butterfly *Callophrys mossii bayensis*

Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/3394>

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

Threatened

Crustaceans

NAME

STATUS

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

Threatened

Vernal Pool Tadpole Shrimp *Lepidurus packardii*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2246>

Endangered

Flowering Plants

NAME

STATUS

Large-flowered Fiddleneck *Amsinckia grandiflora*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/5558>

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Delta Smelt <i>Hypomesus transpacificus</i> https://ecos.fws.gov/ecp/species/321#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

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

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

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Burrowing Owl *Athene cunicularia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

Lawrence's Goldfinch *Carduelis lawrencei*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Breeds Mar 20 to Sep 20

Lewis's Woodpecker *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Long-billed Curlew *Numenius americanus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5511>

Breeds elsewhere

Marbled Godwit *Limosa fedoa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Breeds elsewhere

Nuttall's Woodpecker *Picoides nuttallii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Breeds Apr 1 to Jul 20

Oak Titmouse *Baeolophus inornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Breeds Mar 15 to Jul 15

Short-billed Dowitcher *Limnodromus griseus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Breeds elsewhere

Song Sparrow *Melospiza melodia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Feb 20 to Sep 5

Spotted Towhee *Pipilo maculatus clementae*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Breeds Apr 15 to Jul 20

Tricolored Blackbird *Agelaius tricolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Breeds Mar 15 to Aug 10

Whimbrel *Numenius phaeopus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Breeds elsewhere

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Yellow-billed Magpie *Pica nuttalli*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

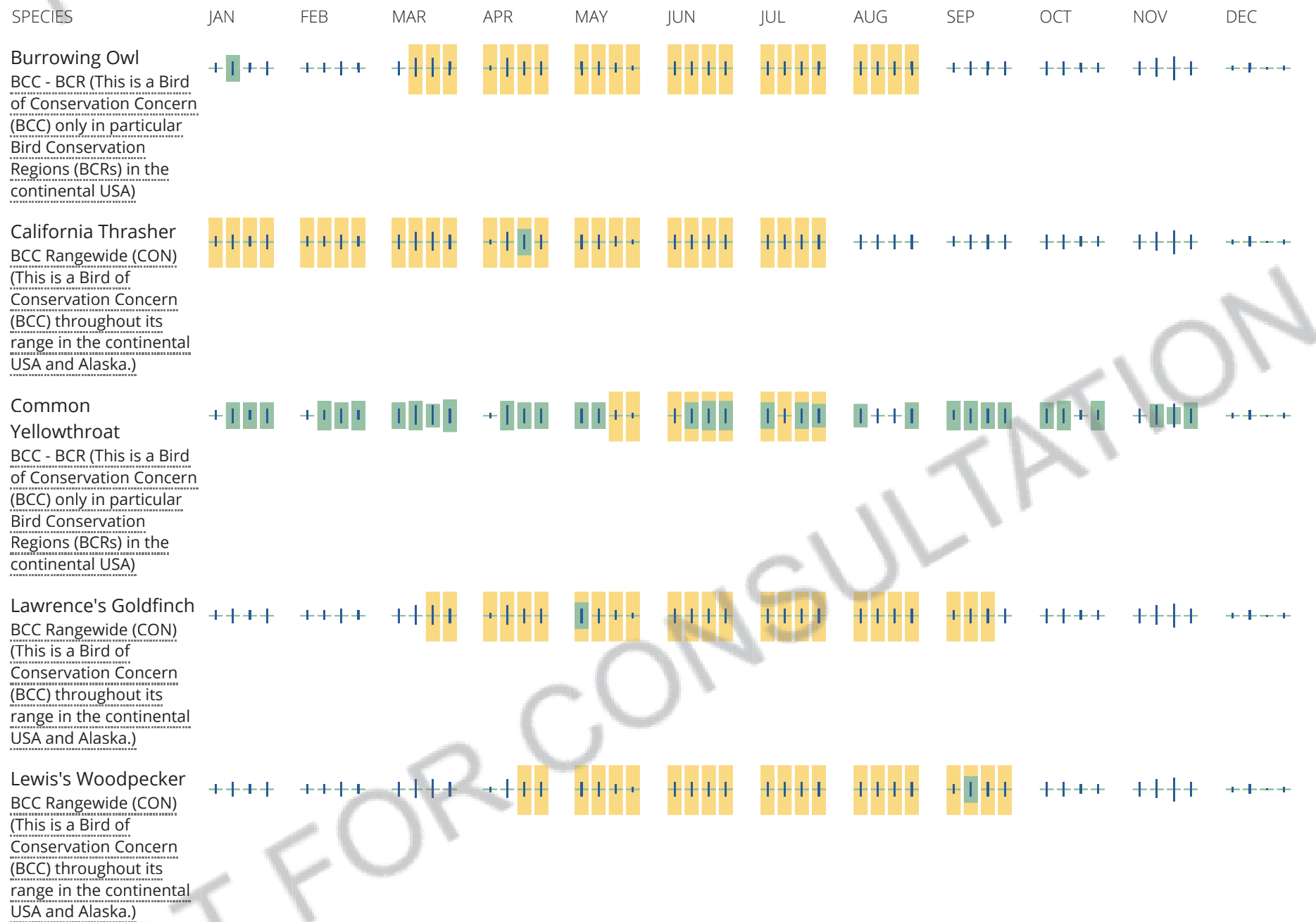
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort — no data



Long-billed Curlew
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



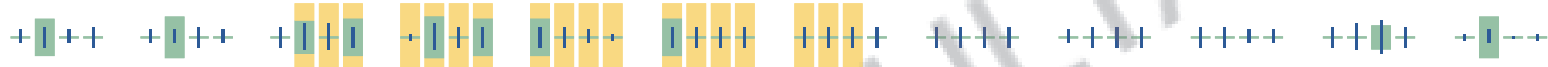
Marbled Godwit
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



Nuttall's Woodpecker
BCC - BCR (This is a Bird
of Conservation Concern
(BCC) only in particular
Bird Conservation
Regions (BCRs) in the
continental USA)

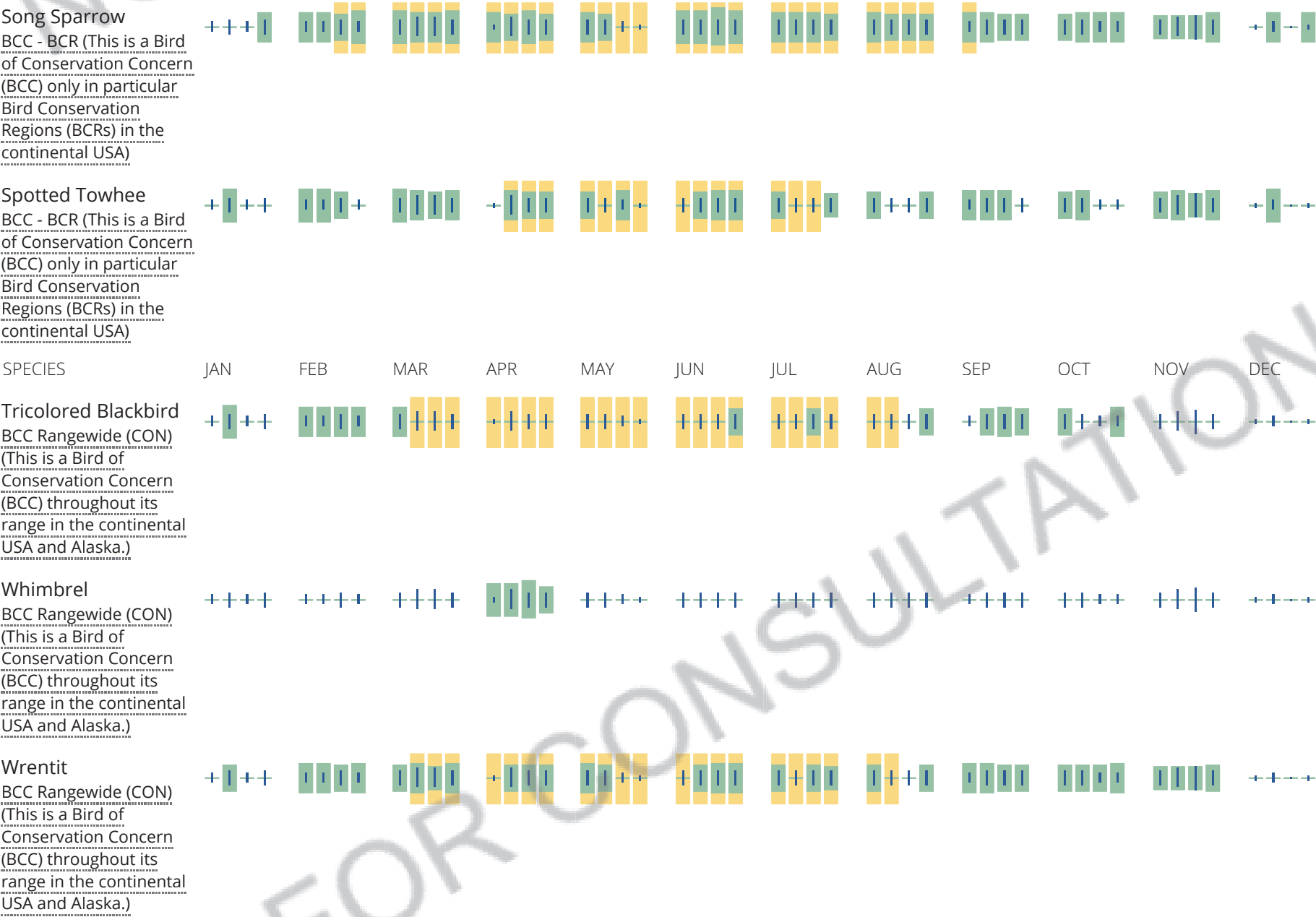


Oak Titmouse
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)

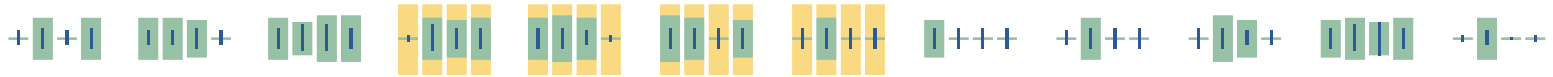


Short-billed
Dowitcher
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)





Yellow-billed Magpie
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



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

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1Kx](#)

OTHER

[Pf](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment 3

Photographs



Photograph 1. View south-southeast along western edge of the NCPA-LEC switchyard that represents the northeastern edge of the proposed storage area.



Photograph 2. View of one of several small sink-holes that are found along the northeastern edge of the proposed storage area.



Photograph 3. View west of the irrigation canal from near the southwest corner of the NCPA-LEC property.



Photograph 4. View east of the irrigation canal from near the southwest corner of the NCPA-LEC property.



Photograph 5. View north-northwest along the western edge of the NCPA-LEC property, with the drainage ditch.



Photograph 6. View east-northeast of the concrete channel separating the NCPA-LEC on right from the Lodi Wastewater Treatment Facility on left. Photograph taken from the northeast corner of proposed storage facility.



Photograph 7. View northwest of the Lodi Wastewater Treatment Facility ponds near the northeast corner of proposed storage facility.



Photograph 8. View west-southwest along northern boundary of proposed storage area showing ruderal vegetation (mostly milk thistle and mustard) in the northeast portion and the concrete pipe segments currently stored on site.



Photograph 9. View of a storm drain vault that indicates an underground pipe running along the northern boundary of the proposed storage area.



Photograph 10. View northeast of the proposed storage area from near its western end. NCPA-LEC (right) and Lodi WWTF (left) are in background.



Photograph 11. View east of the drainage ditch about 180 feet south of the proposed storage area.



Photograph 12. View west of the drainage ditch about 180 feet south of the proposed storage area. The irrigation canal is located to the left beyond the existing roadway.



Photograph 13. View west of the flooded irrigation canal more than 200 feet south of the proposed storage area.



Photograph 14. View east of the flooded irrigation canal more than 200 feet south of the proposed storage area.



Photograph 15. View east of drainage ditch channel from the Observation Point.



Photograph 16. View south of the drainage ditch channel at the Observation Point.



Photograph 17. View west of the drainage ditch channel from the Observation Point



Photograph 18. View east along the northern edge of the drainage ditch from near the Observation Point.



Photograph 19. View east-northeast showing shallow soil berm just before concrete pipes and monitoring well pad. Note the lowest overhead transmissions lines occur near the concrete pipe segments.



Photograph 20. View west-southwest showing recent grading of fill along northern boundary of the proposed storage area.



Photograph 21. View south from southern edge of proposed storage area showing recent grading and concrete vaults.



Photograph 22. View north of shallow soil berm near the concrete pipe segments.



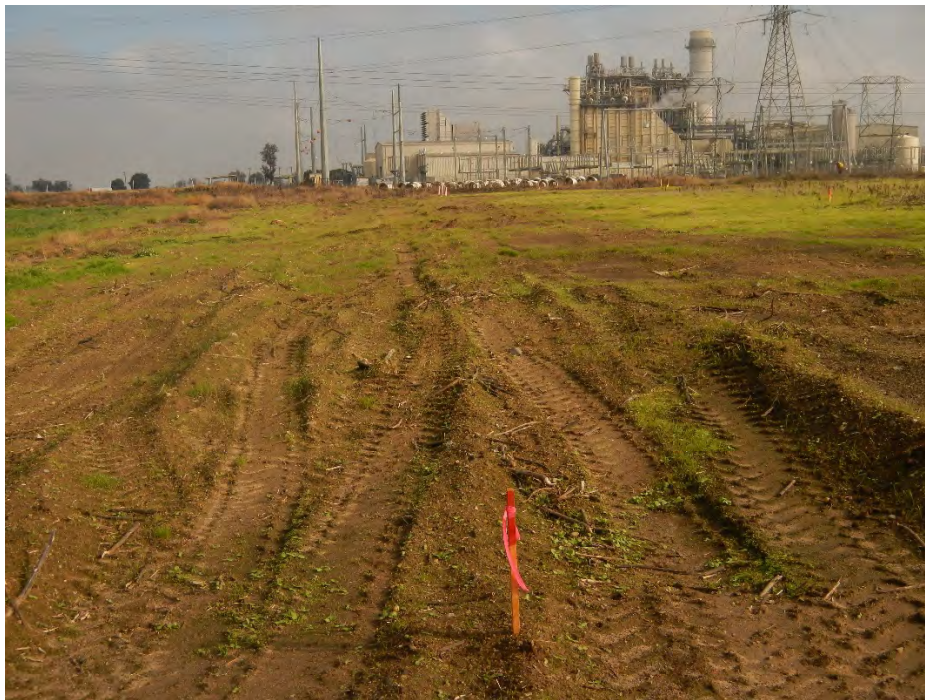
Photograph 23. View west of shallow soil berm to south of the concrete pipe segments.



Photograph 24. View east of concrete pipe segments that currently provide potential wildlife cover.



Photograph 25. View east along southern boundary of the proposed storage shown approximately by wood stakes in fore- and background.



Photograph 26. View east-northeast along northern boundary of the proposed storage shown approximately by wood stake in foreground and northern edge of the NCPA-LEC in background.

Attachment C
Site Phase 1 Assessment

Prepared for:

Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

PHASE I

ENVIRONMENTAL SITE ASSESSMENT

Lodi Energy Center
12745 North Thornton Road
Lodi, California 95242

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

3043 Gold Canal Drive, Suite 100
Rancho Cordova, California 95670

Project Number: SAC278
March 2020

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Appendix H Photo Log

1.0 INTRODUCTION

Geosyntec Consultants (Geosyntec) completed this Phase I Environmental Site Assessment (ESA) for the property located at 12745 North Thornton Road in Lodi, California (the “Site”) for Northern California Power Agency (NCPA) Lodi Energy Center (LEC). This Phase I ESA was completed by Geosyntec for NCPA (hereafter referred to as “NCPA” or “User”). NCPA is contemplating leasing the Site from the City of Lodi for use as a laydown area.

This report documents the methods and findings of the Phase I ESA performed in general conformance with the scope and limitations of American Society of Testing and Materials (ASTM) Standard E1527-13 and the Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (40 CFR Part 312). The purpose of the Phase I ESA is to identify “Recognized Environmental Conditions” (RECs), historical recognized environmental conditions (“HRECs”), and/or controlled recognized environmental conditions (“CRECs”) at the Site and potential impacts from nearby facilities. For the purpose of this report, and as defined by ASTM Standard E1527-13, a REC is, “... *the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.*”

A HREC is “... *a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).*”

A CREC is a REC “... *resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).*”

1.1 Scope of Work

The scope of the Phase I ESA activities included:

- A review of the general Site setting and condition, including known information regarding the regional and local geologic and hydrologic conditions.
- A review of regulatory agency records to obtain information regarding environmental investigations on or near the Site. The records review included retaining the services of a commercial database firm (Environmental Risk Information Services, Inc. [ERIS]), to provide a listing of publicly documented environmental records for the Site and at nearby properties within a one-mile radius. A copy of this report is included as **Appendix A**.
- A review of available public agency records for information regarding environmental permits, violations, or incidents, and/or the status of enforcement actions. Agencies contacted included the following:
 - San Joaquin County Environmental Health Department (EHD);
 - State of California, Department of Toxic Substances Control, Envirostor Database;
 - State of California, State Water Resources Control Board (SWRCB), GeoTracker Database; and
 - State of California, Geologic Energy Management Division (CalGEM).

Copies of relevant documents obtained from agency files are included in **Appendix B**.
- A review of historical records for the Site and nearby facilities to assess potential for environmental impairment. Historical records reviewed included historical aerial photographs, historical topographic maps, historical fire insurance maps (if available), and historical city directory files. Copies of these historical records are included in **Appendices C through F**.
- A review of information provided by the User. Copies of documents provided to Geosyntec by the User are included in **Appendix G**.
- Performance of a Site reconnaissance to observe general conditions at the Site and adjacent properties as they relate to potential environmental impacts. The purpose of the reconnaissance was to identify, to the extent possible, current uses and improvements of the Site, past uses of the Site, current uses of adjacent properties, and evidence of existing and historical hazardous materials use, disposal, storage, and releases on the Site and/or adjacent properties. Photographs representative of Site conditions at the time of the reconnaissance are presented in **Appendix H**.

- Preparation of this Phase I ESA, which documents the above activities, our findings and opinions as they pertain to the identification of RECs, and data gaps.

1.2 Significant Assumptions

While this report provides an overview of potential environmental concerns both past and present, this Phase I ESA is limited by the availability of information at the time of the assessment. The conclusions and recommendations regarding environmental conditions presented in this report are based on observed conditions at the time of the Site reconnaissance and on information gathered during interviews, review of agency records, and execution of the scope of work previously described.

1.3 Limitations and Exceptions

This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs, HRECs, and CRECs to be present at the Site. Not every property warrants the same level of assessment. Consistent with good commercial or customary practice, the appropriate level of assessment was guided by the type of property subject to assessment and the information developed in the course of inquiry.

Additional services considered optional by ASTM Standard E1527-13, such as asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality, industrial hygiene, lead-based paint, lead in drinking water, mold, radon, and wetlands were not included in the scope of work.

The findings and conclusions presented in this Phase I ESA are the result of professional interpretation of the information collected at the time of this study. This Phase I ESA was not an exhaustive search of all available records. Geosyntec cannot “certify” or guarantee that any property is free of environmental impairment; no warranties regarding the environmental quality of the property are expressed or implied. Specific limitations to our conclusions, as a result of information gaps or incomplete information, are documented in Section 7.3

The findings of this report, to the best of our knowledge, are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate regulations and standards may occur, whether they result from legislation, from the broadening of knowledge, or from other reasons. Per the ASTM E1527-13 Standard (the Standard), a Phase I ESA completed less

than 180 days prior to the date of acquisition of the Site is presumed valid. A Phase I ESA for which the information was collected or updated within one year of the date of acquisition of the Site may be used, provided that the report is updated within 180 days of the date of purchase or intended transaction. Per the Standard, if a Phase I ESA or Phase I ESA Update is not completed within 12 months of the information collected, a new Phase I ESA is required.

Specified information contained in this report has been obtained from publicly available sources and other secondary sources of information. Although care has been taken in compiling this information, Geosyntec disclaims any and all liability for any errors, omissions, or inaccuracies of the third parties in such information and data.

The work was performed using the degree of care and skill ordinarily exercised under similar circumstances by environmental consultants practicing in this or similar localities at the time these services were provided. No other warranty or guarantee, expressed or implied, is made as to the findings, opinions, and conclusions included in this report.

1.4 Special Terms and Conditions

Except as noted in Geosyntec's proposal dated 16 December 2019, no special contractual terms and conditions were taken into account as part of this project or influenced the interpretations and conclusions presented herein.

1.5 User Reliance

This Phase I ESA report has been prepared solely for the benefit of NCPA. Geosyntec has issued the Phase I ESA report to this entity and grants the right to rely on the report contents.

No third party shall have the right to rely on Geosyntec opinions rendered in connection with the services without Geosyntec's written consent, which may be conditioned on the third party's agreement to be bound to acceptable conditions and limitations similar to Geosyntec's proposal. It should be noted that Geosyntec's consent to provide a right-to-rely on this Phase I ESA report is subject to the User's approval and to agreement with Geosyntec's terms and conditions associated with Geosyntec's performance of this specific Phase I ESA.

2.0 PROPERTY DESCRIPTION

2.1 Location and Legal Description

The Site is located in an agricultural area west of Highway 5 in the city of Lodi in San Joaquin County, California (**Figure 1**). The address associated with the Site is 12475 North Thornton Road. The Site is owned by the City of Lodi. The NCPA LEC is located adjacent to the east of the Site and the White Slough Water Pollution facility (WSWP) is located adjacent to the north-northeast of the Site.

Topographic map coverage of the Site and vicinity is provided by the United States Geologic Survey (USGS), 7.5-Minute, Terminous, California Quadrangle (USGS, 2015). The Site exists in the San Joaquin County's records as Assessor Parcel Number (APN) 055-12-011 and includes an area of approximately 2.32 acres.

2.2 Site and Vicinity General Characteristics

2.2.1 General Site Setting

According to the USGS 7.5-Minute Series, Terminous, California Quadrangle topographic map (USGS, 2015), the Site is relatively flat. According to information provided by the ERIS Physical Setting Report (PSR; ERIS, 2019), the Site is situated at latitude 38.08791856 (north) and longitude 121.38967829 (west) and the Site elevation is approximately 7.61 feet above mean sea level (MSL).

2.2.2 Regional Geology and Hydrogeology

The Site is located in the Eastern San Joaquin subbasin of the San Joaquin Valley Groundwater Basin. The subbasin is bound on the south by the Modesto subbasin, on the southwest by the Delta-Mendota subbasin, on west by the Tracy subbasin, and on the northwest and north by the Solano, South American and Cosumnes subbasins of the Sacramento Valley Groundwater Basin. The Eastern San Joaquin subbasin is drained by the San Joaquin River and many of its tributaries including the Stanislaus River, Calaveras River and Mokelumne River. The San Joaquin River flows northwest and empties to the San Francisco Bay. The significant water bearing formations of the Eastern San Joaquin subbasin include the Alluvium and Modesto/Riverbank Formations, the Flood Basin Deposits, the Laguna Formation, and the Mehrten Formation (California Department of Water Resources [DWR], 2006).

2.2.3 Site Geology and Hydrogeology

A well completion report was obtained from DWR's Well Completion Report (WCR) map finder web application¹ for a domestic well installed at the LEC. According to the boring log, soils encountered near the Site consisted of silt and silty clays in the top 65 feet and alternating layers of the clay and sand from 65 feet to 240 feet below ground surface (bgs).

First encountered groundwater was measured at 20 feet bgs during the installation of the above referenced domestic well. According to a Geotracker site (T0607700815) located approximately 1¾ miles north of the Site, groundwater flow is generally to the east; however, local groundwater flow may be influence by infiltration from the adjacent WSWP ponds and pumping from surrounding domestic and agricultural supply wells.

2.3 Current Use of the Site and Adjoining Parcels

The Site is currently undeveloped and is used by the City of Lodi for the storage of pipes and other various equipment related to the WSWP plant located adjacent to the Site. The Site was generally covered in vegetation with a few unimproved roads in the northern and central portion of the Site. Some stockpiled soil was observed in the northeast corner of the Site that appeared to be from grading activities of the Site. **Figure 2** shows the layout of the property at the time of Geosyntec's Site reconnaissance.

The Site was located in an area that is primarily developed for agricultural purposes with the exception of the adjacent NCPA LEC and WSWP facilities. Adjacent properties included:

- To the north – Ponds associated with the WSWP plant;
- To the south – An irrigation canal and agricultural land;
- To the east – Agricultural land; and
- To the west – The NCPA LEC.

¹ <https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports> (accessed February 21, 2020)

The adjacent properties were generally observed from vantage points along the perimeter of the Site during the Site reconnaissance. The purpose of these observations were to attempt to identify sources of potential environmental impairment in close proximity to the Site that could represent potential threats to the Site due to surface water runoff, groundwater transport, or other contaminant transport pathways. These observations are discussed in Section 5.3 of this report.

3.0 USER-PROVIDED INFORMATION

In accordance with ASTM Standard E 1527-13, Geosyntec requested that the User of the Phase I ESA provide information and complete a User Questionnaire that would assist in identifying the possibility of RECs in connection with the Site. Mr. Michael Fallon, Environmental Health and Safety Specialist with NCPA filled out the User Questionnaire on 11 February 2020. A copy of the completed Questionnaire is provided in **Appendix G**.

3.1 Title Records

No title records for the Site were provided.

3.2 Environmental Liens or Activity and Use Limitations

Mr. Fallon stated that he was not aware of any environmental liens or activity and use limitations associated with the Site as they are defined by ASTM E 1527-13.

3.3 Specialized Knowledge

Mr. Fallon indicated that he did not have any specialized knowledge of the Site as it is defined by ASTM E 1527-13.

3.4 Commonly Known or Reasonably Ascertainable Information

Mr. Fallon stated he did not have any commonly known or reasonably ascertainable information pertaining to the Site as defined by ASTM E 1527-13.

3.5 Valuation Reduction for Environmental Issues

Mr. Fallon indicated that the purchase price reasonably reflected the fair market value of the Site

3.6 Owner, Property Manager, and Occupant Information

According to Mr. Fallon, the Site was owned by the City of Lodi and was used for storage and agricultural purposes.

3.7 Reason for Performing This Phase I ESA

According to Mr. Fallon, this Phase I was being conducted to support the lease of the property.

3.8 User Provided Documentation

The User provided Geosyntec with additional information regarding the Site. Information provided included a California Energy Commission's (CEC) project change questionnaire requesting additional storage area for the NCPA LEC. Additionally, a Biological Resource Assessment for the Site was provided. Pertinent information obtained from these records are included throughout this report.

4.0 RECORDS REVIEW

4.1 Standard Environmental Records Database Search

In accordance with ASTM Practice E 1527-13, Geosyntec reviewed applicable and reasonably accessible federal, state, and local records as part of this Phase I ESA. The environmental records review was performed in the form of an environmental database search by ERIS, to ascertain whether the Site or neighboring properties were suspected of having environmental conditions with the potential to impact (or that have impacted) the soil and/or groundwater at the Site. The database search includes regulatory agency lists of known or potential hazardous waste facilities, landfills, hazardous waste generators, and disposal facilities in addition to properties under investigation. The information provided in this report was obtained from publicly available sources. The locations of the properties listed in this report are plotted with a geographic information system (GIS) utilizing geocoding of property addresses. Specific records and search distances for these environmental databases were reported by ERIS to be consistent with ASTM Practice E 1527-13 and are discussed in the ERIS report (dated 12 February 2020); this report is presented as **Appendix A**.

4.1.1 Environmental Records Search Results

ERIS's search of available "reasonably ascertainable" government records found three listings, with the same address as the Site, but outside the Site boundaries, within the ASTM-specified search distances in the sub-sections that follow.

4.1.1.1 Site Record Results

No records associated with the Site were identified by ERIS. Two records were identified with the Site address, outside of the Site boundaries. These records are discussed in section 4.1.1.2, below.

4.1.1.2 Adjacent and Offsite Record Results

The complete list of properties that ERIS has identified is included in the report in **Appendix A**. A total of two facilities are listed on at least one of the databases searched. Geosyntec reviewed the facilities and locations for potential environmental risk to the Site. The two listings are summarized below:

- Northern California Power Agency (NCPA)/Lodi Energy Center (12745 North Thornton Road) – This property shares the same address as the Site; however, it is not located within the Site boundaries. This facility was located adjacent to the

east of the Site (downgradient) and was listed on the ERIS San Joaquin County - Aboveground Tank List (SANJOAQUIN AST) and RCRA Non-Generators (RCRA NON GEN) databases. This facility was reportedly owned by NCPA and operated as an energy generation facility. According to the SANJOAQUIN AST database, this facility stores between 1,320 gallons and 10,000 gallons of hazardous substance or petroleum products; however, the number, size, and contents of the ASTs were not reported. ERIS Voluntary Cleanup Program (VNP) and Envirostor databases. This facility consisted of a 4.4-acre parcel that is located within the City's existing White Slough Water Pollution Control Facility (WPCF) and described as a portion of the San Joaquin County Assessor's Parcel Number (APN) 055-139-16. Facility documents specified prior to the early 1960's, the property was used for agricultural purposes, and has been used periodically since the 1980's for the stockpiling of bio-solids/sludge removed from storage ponds at the adjacent WPCF. Preliminary environmental investigations indicated the presence of elevated concentrations of metals, total petroleum hydrocarbons (TPH), polynuclear aromatic hydrocarbons (PAHs) and organochlorine pesticides (OCPs) in the surface soils. Additional information regarding this VCP is provided in Section 4.2.2. Concentrations of constituents of concern were below applicable screening criteria therefore, this facility is not considered a REC.

- 12745 North Thornton Road – This facility was located approximately 1,000 feet to the east of the Site (downgradient) and though it was not reported by ERIS, is believed to be the WSWP facility and was listed on the ERIS San Joaquin County - Complaints and Incident Reports (SJ COMPLAINTS), San Joaquin County - Site Mitigation List (SJ SML) and RCRA Non-Corrective Action Treatment, Storage, and/or Disposal Facilities (RCRA TSD) databases. SJ COMPLAINTS documented four quarts of waste oil were reportedly abandoned on the side of the road on 17 September 2013. Additionally, an iron (III) chloride release was reported at this facility on 25 October 2017. It was not reported whether the spill was remediated; however, it appeared there was a spill response action taken for the reported leak. The Site was listed on the SJ SML and documented RWQCB as the lead agency for oversight of this waste discharge site. Additional information was obtained from San Joaquin County Environmental Health Department (EHD; refer to Section 4.2.1). The RWQCB regulates this facility under waste discharge requirements (WDRs). Minor violations were reported; however, this facility is not considered a REC. Refer to Section 4.2.1 for additional information.

4.1.1.3 Unplottable Sites

Twenty-six unplottable properties were identified by ERIS, which could not be mapped by ERIS due to poor or insufficient address information. In general, these sites were identified on the SJ COMPLAINTS database for small releases of petroleum products or hazardous substances and debris dumping. Based on a review of the unplottable sites, they were determined to not be in the near vicinity of the Site and not anticipated to have adversely impact the Site.

4.2 Additional Environmental Record Sources

Local and state agencies were also contacted by Geosyntec for available current or previous documentation of hazardous materials use, storage, and/or unauthorized releases that may have impacted the Site. Section 1.1 of this Phase I ESA detailed the additional environmental record sources searched. The requested information and subsequent information received from the agencies is summarized below and provided in **Appendix B**.

4.2.1 San Joaquin County Environmental Health Department

On 22 February 2020, Geosyntec reviewed the San Joaquin County EHD records for information pertaining to the Site address (12745 North Thornton Road) and adjacent property's address (12751 North Thornton Road). Information for the NCPA LEC and WSWP facility obtained from San Joaquin County EHD is summarized below. Copies of documents obtained are included in **Appendix B**.

A monitoring well installation work plan prepared by West Yost Associates in September 2014. According to this work plan, an existing monitoring well, WSM-2, was located in the southern-central portion of the Site (refer to **Appendix B** and **Figure 2**). This monitoring well was part of the WSWP monitoring well network as part of their Waste Discharge Requirements (WDRs). The work plan proposed to install a second monitoring well, WSM-2R, in the northern portion of the Site (refer to **Appendix B** and **Figure 2**). The location of these monitoring wells is consistent with the wells observed during Site reconnaissance (refer to Section 5.3.13). WSM-2 was suspected to be damaged; therefore, the purpose of WSM-2R was to replace the existing WSM-2. Groundwater data did not appear to be available for these monitoring wells; however, a time-trend chart for nitrate in WSM-2 showed concentrations of nitrate ranging from approximately 5 milligrams per liter (mg/L) to 100 mg/L. The work plan noted that concentrations of nitrate in WSM-2 were elevated above concentrations of nitrate reported in samples collected from the WSWP ponds and attributed the elevated nitrate concentrations to another source.

Additionally, three USTs were reported on the WSWP facility approximately 1,250 feet east of the Site. A 1,000-gallon diesel UST and a 2,000-gallon diesel fiberglass UST were removed from this facility in 1989. No hydrocarbon odors were noted during the removal, according to the records. Soil was reportedly excavated to 12 feet bgs during removal but groundwater was not encountered. Soil samples were collected and analyzed for total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylene (collectively, BTEX). According to a letter from San Joaquin County dated September 27, 1993, the UST case could not be closed because though the soil sample results did not have reported concentrations of TPH or BTEX, the detection limits on the BTEX soil sample results were elevated above screening criteria. A third 550-gallon diesel UST was removed in October 1993. According to the removal documentation, no soil discoloration or odors were observed during removal. There was no record of soil or groundwater confirmation sampling following the removal. Based on the available documentation, these USTs were not anticipated to be located on or near the Site.

A Class 1 Underground Injection Control Well Permit Application dated October 2008 was available for the eastern adjacent NCPA LEC. According the application, the facility owned and operated a steam injected gas turbine (STIG) plant for generating electricity since 1993. NCPA was in the process of adding a second electrical power plant. As part of the waste-disposal process, the STIG plant owned and operated a Class I injection well (STIG-1). The application was to install injection wells LEC-1 and potentially LEC-2 as a backup injection well. According to the User, only two injection wells are located at the Site. STIG-1 is located adjacent to the northeast corner of the Site and LEC-1 is located approximately 300 feet southwest of the Site.

4.2.2 Department of Toxic Substances Control, Envirostor Database

Geosyntec reviewed the Envirostor database for additional information regarding the Site and adjacent properties on 21 February 2020. A VCP agreement and Preliminary Endangerment Assessment (PEA) Report were available for the adjacent NCPA LEC property. According to the VCP agreement, the City of Lodi entered into the agreement in 2009 to address the soil contamination found at the Site during a Phase I ESA and Phase II ESA conducted between 2008 and 2009. The property was historically used for agriculture until the 1980's when it was used for the stockpiling of bio-solids/sludge removed from the storage ponds at the adjacent WSWP property. During the Phase II, metals, TPH, PAHs and OCPs were detected in soil at elevated concentrations. Copies of the Phase I and Phase II ESAs were not available for review. A PEA was completed by Stantec in November 2009. According to the PEA, the Phase II report had incorrectly reported the PAH and OCP concentrations in milligrams per kilogram (mg/kg); however,

they should have been reported in micrograms per kilogram (µg/kg). The unit error caused a one-thousand increase in the concentrations from their actual values and therefore presented a false impression of a significant risk to human health and the environment (Stantec, 2009).

Soil samples and one groundwater sample from the on-site monitoring well were collected during the PEA and analyzed for PAHs, OCPs, metals, TPH, and VOCs. Borings were advanced up to 6.5 feet bgs for collection of the soil samples. Reported concentrations of the constituents of concern were below applicable screening criteria and background levels. No tables or figures were provided in the PEA available on Envirostor.

On 10 December 2009, DTSC granted no further action of the property. A copy of this letter and the previously referenced reports are included in **Appendix B**.

4.2.3 State of California, State Water Resources Control Board (SWRCB), GeoTracker Database

Geosyntec reviewed the State of California, SWRCB GeoTracker database for additional information regarding the Site and adjacent properties on 21 February 2020. The Site and surrounding properties were not listed on GeoTracker.

4.2.4 State of California, Geologic Energy Management Division (CalGEM)

Geosyntec reviewed the CalGEM database on 21 February 2020 for oil, gas, and geothermal wells on or in the vicinity of the Site. After reviewing the database, it appeared no wells were present on the Site. A plugged dry hole operated by NCPA was located on the western adjacent property. A copy of this map is included in **Appendix B**.

4.3 Historical Documentation Review

4.3.1 Historical Aerial Photograph Review

As part of this Phase I ESA, an aerial photograph review was conducted to help evaluate past uses of the Site, as well as adjoining properties. The ERIS Historical Aerial Package provided Geosyntec with aerial photographs dated 1957, 1968, 1974, 1987, 1993, 1998, 2005, 2006, 2009, 2010, 2012, 2014, 2016 and 2018. A copy of the aerial photographs package obtained from ERIS is included as **Appendix C** to this report. The following sections describe conditions at the Site and surrounding areas over time based on aerial photograph interpretations and observations.

4.3.1.1 Site

In 1957, the Site appeared to have been used for agricultural purposes and remained under agricultural use through 1987. By 1968, an unpaved road was constructed along the northern border of the Site, and by 1974, a second unpaved road was constructed through the center of the Site running north and south.

In 1993, some soil disturbance was observed in the eastern portion of the Site. Two features were observed in the northeast corner; however, due to the poor image quality, the nature of these features could not be discerned.

By 1998, the Site was cleared and no longer appeared to be used for agricultural purposes. Between 1998 through 2010, various grading activities appeared to have been conducted on the Site.

In 2012, the Site appeared to be a storage or staging area for the eastern adjacent property. By 2014, the Site no longer appeared to be used for storage. Site conditions appeared relatively unchanged in 2016.

In 2018, concrete pipes were stored on the Site. An unpaved road was observed in the southern portion of the Site.

4.3.1.2 Surrounding Areas

In 1957, the area surrounding the Site appeared to have been used for agricultural purposes. Approximately 100 feet south of the Site, there was an irrigation/drainage channel running east and west. By 1968, the area directly north and east of the Site was under development. Additionally, two buildings were constructed approximately 1,500 feet east-southeast of the Site.

By 1974, the facility currently known as WPCF was established with several ponds (including aeration ponds) constructed directly north-northeast of the Site and approximately 500 feet east of the Site. Additionally, two ASTs and one building were constructed approximately 1,000 feet east of the Site.

By 1987, a highway was constructed approximately 1,500 feet east of the Site, running north and south. Additionally, a large irrigation/drainage channel was constructed approximately 2,000 feet west of the Site, running north and south.

By 1993, the area directly east of the Site appeared to be recently graded. Two settling tanks and an additional AST were constructed at WPCF approximately 1,500 feet east of

the Site. Additionally, the buildings approximately 1,500 feet east-southeast of the Site were removed.

By 1998, the facility currently known as NCPA was established approximately 300 feet east of the Site. In 1998, NCPA consisted of an industrial complex with several buildings and six ASTs. NCPA also paved the area directly east of the Site. Additionally, WPCF was expanded with several ponds constructed approximately 500 feet to 1,500 feet southeast of the Site.

By 2005, buildings were constructed on the WPCF facility approximately 1,500 feet northeast of the Site. The new buildings were constructed in an area where there was previously a pond.

By 2009, an additional settling tank and an additional AST were constructed on the WPCF facility approximately 1,500 feet east of the Site. Conditions of the surrounding area appeared relatively consistent through 2010.

By 2012, several additional structures were constructed on the NCPA facility approximately 500 feet east of the Site. These structures including nine ASTs and several industrial buildings. Additionally, a building was constructed on the WPCF facility approximately 1,000 feet east of the Site.

4.3.2 Historical Topographic Map Review

A historical topographic map review was conducted to evaluate past uses of the Site, as well as adjoining properties. The ERIS Historical Topographic Map Report provided Geosyntec with topographic maps (and quad) dated 1910 (Headreach, CA quad) 1939 (Lodi, CA quad), 1942 (Lodi, CA quad), 1952 (Terminous, CA quad), 1969 (Terminous, CA quad), 1978 (Terminous, CA quad), 1993 (Terminous, CA quad), 1997 (Terminous, CA quad), and 2015 (Terminous, CA quad). A copy of the topographic map package is included as **Appendix D** to this report. The following sections describe conditions at the Site and surrounding areas over time based on topographic map interpretations and observations.

4.3.2.1 Site

From 1910 through 2015, there were no features depicted on the Site on the topographic maps, with the exception of a road cross through the Site in 1969. This road was not depicted on other topographic maps.

4.3.2.2 Surrounding Areas

In 1910, the area surrounding the Site appeared to be undeveloped land. By 1939 an irrigation/drainage channel was established 100 feet south of the Site. Additionally, the land approximately 2,000 feet west of the Site was identified as wetlands. The wetland area was indicated on the topographic maps through 1969.

In 1969 two buildings and two ASTs were depicted approximately 2,000 feet west of the Site. By 1978, the WSCF facility was constructed approximately 500 feet northeast of the Site, including several ponds and buildings. Also, a highway was constructed approximately 1,500 feet east of the Site, running north and south. Additionally, a large irrigation/drainage channel was constructed approximately 2,000 feet west of the Site, running north and south.

By 2015, additional ponds were constructed at the WSCF facility approximately 1,000 feet southeast of the Site. Buildings were no longer depicted on the topographic map.

4.3.3 Fire Insurance Map Review

According to ERIS, no Fire Insurance maps were available for the Site. Documentation of the lack of coverage is provided in **Appendix E**.

4.3.4 City Directory Review

Historical City Directory listings were obtained from ERIS for the Site and adjoining properties. Directories were available and reviewed for the years 1930 through 2018, non-inclusive. A copy of the ERIS City Directory Report is included as **Appendix F** to this report.

4.3.4.1 Site

Geosyntec reviewed the City Directory listings for the Site. There were no addresses listed from 1930 through 1983. The following listings, associated with the Site address, were reported by the ERIS City Directory:

12745 Thornton Road (Site):

- 2012: ARB Inc., (construction management) and Siemens Energy Inc. (energy management);
- 2018: Northern California Power Agency (electric) and STIG (other management consulting);

4.3.4.2 Surrounding Areas

Other facilities located near the Site included the Lodi City Public Works Wastewater Treatment facility which was later renamed the White Slough Water Pollution facility.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

Ms. Laura Foot, under the direction of Mr. Arthur Forma, both of Geosyntec performed a reconnaissance of the Site on 18 February 2020 to assess the environmental conditions on and around the Site. Geosyntec was permitted access to all areas of the Site during the Site reconnaissance. Much of the Site is vacant; however, the eastern portion of the Site used by the City of Lodi for the storage of unused concrete pipes and utility vaults.

As part of the Site reconnaissance, Geosyntec looked for evidence of the presence of hazardous substances used, stored, or discarded at and in the vicinity of the Site. Moreover, Geosyntec surveyed the Site for areas of disturbed or discolored soil, suspect equipment that may contain hazardous substances, areas of distressed vegetation, wastewater discharge areas, storage tanks/septic systems, waste management/disposal areas, lagoons, pits, sumps, surface water management areas, stained surfaces, etc.

Adjoining properties were observed from the perimeter of the Site or via access roads and entrances into these properties. Selected photographs taken during the Site reconnaissance are presented in **Appendix H**.

5.2 General Site Setting

5.2.1 Current Use of the Property

At the time of Geosyntec's performance of this Phase I ESA, the property was owned by the City of Lodi and consisted a vacant parcel being used for the storage of concrete pipes and vaults. A small amount of equipment storage was observed in the eastern portion of the Site. Two wells were observed on the Site. **Figure 2** shows the layout of the property at the time of Geosyntec's Site reconnaissance.

5.2.2 Current Use of Adjoining Properties and the Surrounding Area

The Site was located in an area that was primarily developed for agriculture. The Site was bordered by agricultural land to the north and west, an irrigation canal and agricultural land to the south, ponds associated with the WSWP facility to the northeast and the NCPA LEC to the east. The San Joaquin County Mosquito and Vector Control facility was located approximately 2,500 feet southwest of the Site. Mosquito abatement ponds are located approximately 1,000 feet southwest of the Site. Based on conditions observed, it did not appear likely that adjacent properties would be considered off-site RECs.

5.3 Observations

5.3.1 Hazardous Substances/Petroleum Products

No hazardous substances/petroleum products were observed during the Site reconnaissance as described in the sections below.

5.3.2 Hazardous Substances/Petroleum Products in Containers (Not Including Tanks)

No hazardous substances/petroleum products in small containers were observed at the Site. An empty bucket of sealant was observed near the concrete pipes on-Site. There was no evidence of a release from the bucket.

5.3.3 Hazardous Substances/Petroleum Products in Storage Tanks

5.3.3.1 Aboveground Storage Tanks (ASTs)

No ASTs were observed at the Site during Geosyntec's reconnaissance.

5.3.3.2 Underground Storage Tanks (USTs)

No evidence (i.e., fill ports or vent pipes) indicative of the presence of USTs was observed during the Site reconnaissance.

5.3.4 Indications of Polychlorinated Biphenyls (PCBs)

No transformers or other indications of PCBs were observed at the Site during reconnaissance.

5.3.5 Stained Soil or Pavement

No soil staining was observed at the Site during reconnaissance.

5.3.6 Stressed Vegetation

Stressed vegetation was observed at the Site. The general areas of stressed vegetation observed during Site reconnaissance are shown on **Figure 2**. Areas of dead grass were observed in the northern portion of the Site. An area of stressed vegetation and soil discoloration was observed in the western portion of the Site.

5.3.7 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were observed at the Site during the reconnaissance.

5.3.8 Pools of Liquid

No pools of liquid were observed at the time of the Site reconnaissance.

5.3.9 Odors

No odors were observed at the time of Site reconnaissance with the exception of odors associated with the WSPS facility near the northeast corner of the Site.

5.3.10 Septic Systems

No evidence of septic systems was observed at the Site during reconnaissance.

5.3.11 Drains and Sumps

No drains or sumps were observed at the Site during reconnaissance.

5.3.12 Wastewater

No evidence of activities generating industrial wastewater were observed at the Site during the reconnaissance.

5.3.13 Wells

Two monitoring wells were observed on the Site. These monitoring wells were consistent with the monitoring well described in Section 4.2.1.

5.3.14 Onsite Solid Waste Disposal and Filled Areas

No evidence of solid waste disposal or filled areas were observed at the Site during reconnaissance. Some soil piles were observed, likely leftover from grading activities at the Site.

5.3.15 Stormwater

The Site is unpaved; therefore, stormwater would likely infiltrate at the Site.

6.0 INTERVIEWS

6.1 Interview with Owner

Geosyntec contacted Mr. Charles Swimley, the City of Lodi Public Works Director, on 21 February 2020. On 25 February 2020, Mr. Swimley was interviewed regarding the current and historical Site use. Mr. Swimley indicated herbicides may be used on the Site for weed control and it was historically used as a land application area and for site storage since the 1940s. Mr. Swimley also indicated that the on-site monitoring wells were monitored quarterly. Mr. Swimley indicated the Mr. Ken Capitanich, the Interim Plant Supervisor for the WSWP facility, could fill out the Owner Questionnaire and may be able to provide monitoring data for the monitoring wells.

On 27 February 2020, Mr. Capitanich provided the Property Owner Questionnaire. Pertinent information provided by Mr. Capitanich included that the Site was historically used as a vacuum truck dump site for collection system waste between 2000 and 2010. According to Mr. Capitanich, dumped material generally consisted of untreated cleanout from city sewers and mains as well as soil for clearing around work areas and a small portion from the WSWP. The dumped material was reportedly from collection tank cleanout activities. He also indicated there were no USTs on-site, no currently or formerly stained soil, no pools of liquid, and no current or historical septic tanks or drain fields at the Site. As of the date of this report, no monitoring data from the on-site monitoring wells has been provided to Geosyntec.

6.2 Interview with Occupant

The Site is currently occupied by the Owner (refer to Section 6.1).

6.3 Interview with Local Government Officials

Based on the information obtained via online regulatory databases, including GeoTracker and EnviroStor, interviews with local government officials were not deemed necessary, and therefore, none were conducted.

6.4 Interview with Others

No interviews with other were performed.

7.0 EVALUATION

7.1 Findings and Opinions

These findings and opinions are based on Geosyntec's evaluation of the information gathered through the following means: environmental database review; Site visit; aerial photographs; topographic maps; environmental file review; and a review of other obtained documents regarding the Site and historical land use at and in the vicinity of the Site.

1. Elevated Nitrate Concentrations in Groundwater – Historical nitrate time-trend charts for on-site monitoring wells showed nitrate concentrations ranging from 5 mg/L to 100 mg/L between 1989 and 2013. The majority of the nitrate concentrations in groundwater were above the maximum contaminant level 10 mg/L. Based on a review of the aerial photographs, the Site appeared to be used for agricultural purposes from at least 1957 through 1987. An irrigation canal was located approximately 250 feet south of the Site since at least 1957. Geosyntec considers the elevated nitrate reported in groundwater a REC. Recent groundwater data for the monitoring wells was not provided to Geosyntec; therefore, the current conditions of groundwater beneath the Site are unknown.
2. Historical Land Application Activities – The Site was historically the location of vacuum truck dumping associated with cleanouts of the collection system between 2000 and 2010. Dumped material reportedly consisted of untreated cleanout material from the city sewers and mains, soil from clearing around work areas, and a small portion of the WSWP. Stressed vegetation and bare, discolored soil was observed at the Site during reconnaissance, therefore, Geosyntec considers this condition to represent a REC.
3. Herbicide Use – According to the Owner, herbicides may be used on the Site for weed control. Information regarding the types of herbicides used and volume and frequency of herbicide application was not provided. This represents a data gap. Herbicide use completed in accordance with manufacturer specifications does not represent a REC; however, without additional information on herbicide use at the Site this finding constitutes a REC.
4. Current Site Use – The Site is currently owned and being used by the City of Lodi as a storage area for concrete pipes and vaults. A small amount of other equipment was observed to be stored on the Site as well during reconnaissance. The Site is

unpaved and concrete pipes and vaults are stored on bare ground. No hazardous materials or petroleum products were observed on the Site; therefore, Geosyntec does not consider this condition to represent a REC.

5. Adjacent Properties – The Site is situated in an agricultural area with agricultural fields located adjacent to the north, west and south of the Site. Adjacent to the east of the Site is NCPA LEC, an industrial facility used as a power plant, and the WSWP facility, a water treatment and holding facility. Hazardous materials and petroleum products are used at the NCPA LEC. Three diesel USTs were formerly located on the WSWP. The San Joaquin County Mosquito and Vector Control District was located approximately 2,000 feet southwest of the Site and ponds associated with this facility were located approximately 1,000 feet southwest of the Site. No releases impacting soil or groundwater have occurred at these facilities; therefore, Geosyntec does not consider this condition to present a REC.

7.2 Conclusions

Geosyntec has performed a Phase I ESA of the Site, located at 12745 North Thornton Road in Lodi, California, in conformance with the scope and limitations of ASTM Practice E1527-13. Any exceptions to, or deletions from this practice, are described in Sections 1, 7.3, and 7.4 of this report. This assessment has revealed the following as RECs, CRECs, or HRECs in connection with the Site:

1. Elevated Nitrate Concentrations in Groundwater (REC)
2. Historical Land Application Activities (REC)
3. Herbicide Use (REC)

7.3 Data Gaps

In accordance with ASTM E1527-13, this section documents data gaps in the information obtained and reviewed as part of this Phase I ESA and discusses the associated significance. A data gap is defined in ASTM E1527-13 as being “... *a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information*”. Data gaps were identified. Geosyntec requested information regarding the herbicide use at the Site as reported by Mr. Swimley as well as monitoring data from the on-site supply wells. As of the date of this report, this information has not been provided to Geosyntec. These data gaps are considered in the findings of this report.

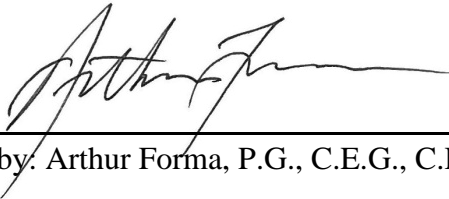
7.4 Exceptions and Deviations

In performance of this Phase I ESA, Geosyntec has not identified potential exceptions or deviations from the ASTM E 1527-13 standard of practice except where noted.

7.5 Signature by Environmental Professionals

We declare, that to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 Code of Federal Regulation (CFR).

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

A handwritten signature in black ink, appearing to read 'Arthur Forma', is written over a horizontal line.

Signed by: Arthur Forma, P.G., C.E.G., C.H.G. (CA) – Senior Principal

7.6 Qualifications

This Phase I Environmental Site Assessment was performed by Ms. Laura Foot of the Sacramento, California office of Geosyntec Consultants. Mr. Arthur Forma, P.G. also of Geosyntec's Sacramento office provided senior review. Mr. Forma is an Environmental Professional as defined by the ASTM E1527-13 standard. Their professional qualifications are summarized in the following paragraphs.

Arthur Forma, PG, CEG, CHG (CA)

Mr. Forma is a licensed Professional Geologist, Certified Engineering Geologist, and Certified Hydrogeologist in California. He has over 20 years of experience in hydrogeology with special emphasis on environmental and hazardous waste issues. He has focused on development and implementation of site characterization and remediation programs for hazardous waste sites, ranging in size from gasoline service stations to complex industrial facilities in California. He has provided strategic consultation and technical direction for sites falling under the jurisdiction of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and numerous state environmental programs in California. He has provided consulting services at oil refineries, aerospace facilities, chemical manufacturing plants, hard rock and aggregate mines, landfills, surface impoundments, waste piles, underground storage tanks, and non-

point source areas of contamination. His experience has included conducting environmental due diligence assessments at over 100 properties throughout his career.

Laura Foot

Ms. Foot graduated California Polytechnic State University in San Luis Obispo, California with a Bachelor's degree in earth science. Ms. Foot has over three and a half years of consulting experience in environmental due diligence and site investigation and remediation projects. Her experience in due diligence work includes the development of many Phase I Environmental Site Assessments (ESAs) for various commercial, industrial and agricultural sites throughout California and a number of other states including Nevada, Utah, Washington and New Mexico. Additionally, Ms. Foot has experience in reviewing historical documentation for large confidential litigation projects. Ms. Foot has assisted in the development site investigation work plans and reports as well as conceptual site models. She has implemented field investigations including soil and groundwater sampling, soil vapor sampling, and indoor air sampling.

8.0 NON-SCOPE CONSIDERATIONS

In accordance with Geosyntec's scope of work for this project, "non-scope considerations," as defined in ASTM E1527-13 were not evaluated. These are environmental issues including asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality, industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance, and wetlands that are beyond the scope of a traditional Phase I ESA.

9.0 REFERENCES

- American Society for Testing and Materials (ASTM). 2013. Standard E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- California Department of Water Resources, 2004. California's Groundwater Bulletin 118 – Eastern San Joaquin Groundwater Basin. 27 February 2004.
- California DTSC. Website for Envirostor: <http://www.envirostor.dtsc.ca.gov/public/>.
- California Regional Water Quality Control Board Geotracker Database. Website: <http://geotracker.swrcb.ca.gov/map/>
- Environmental Risk Information Services (ERIS), 2020. NCPA Phase I, Lodi, California Database Report, Order Number 20200211204. February 12.
- ERIS, 2020. NCPA Phase I, Lodi, California Physical Setting Report, Order Number 20200211204. February 12.
- ERIS, 2020. NCPA Phase I, Lodi, California Topographic Map Report, Order Number 20200211204. February 12.
- ERIS, 2020. NCPA Phase I, Lodi, California Aerial Photograph Report, Order Number 20200211204. February 12.
- ERIS, 2020. NCPA Phase I, Lodi, California City Directory Report, Order Number 20200211204. February 12.
- ERIS, 2020. NCPA Phase I, Lodi, California Fire Insurance Map Report, Order Number 20200211204. February 12.
- Stantec, 2009. Preliminary Endangerment Assessment, Proposed Lodi Energy Center Site, 12475 North Thornton Road, Lodi, California. 2 November.
- United States Geologic Survey (USGS), 7.5-Minute, Terminous Quadrangles Topographic Map (2015).

FIGURES



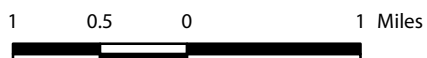
Legend



Site Location

Map Sources

Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012



Site Location Map

NCPA Phase I Environmental Site Assessment
Area F - Northern California Power Agency - Lodi Energy Center
12475 North Thornton Road
Lodi, California

Geosyntec
consultants

Figure

1

Project No.: SAC278

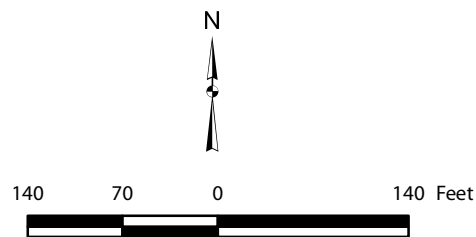
February 2020



Legend

- Monitoring Wells Associated with the White Slough Water Pollution Control Facility
- Distressed Vegetation
- Stockpiled Soil
- Site Boundary

Imagery Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Site Layout

NCPA Phase I Environmental Site Assessment
Area F - Northern California Power Agency - Lodi Energy Center
12475 North Thornton Road
Lodi, California

Geosyntec
consultants

Project No.: SAC278

February 2020

Figure

2

APPENDIX A

**ERIS Report with Physical Setting
Report**



DATABASE REPORT

Project Property:	<i>NCPA Phase I NCPA LEC Site Lodi CA 95242</i>
Project No:	<i>SAC278</i>
Report Type:	<i>Database Report</i>
Order No:	<i>20200211204</i>
Requested by:	<i>Geosyntec Consultants</i>
Date Completed:	<i>February 12, 2020</i>

Environmental Risk Information Services

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Executive Summary

Property Information:

Project Property: *NCPA Phase I
NCPA LEC Site Lodi CA 95242*

Project No: *SAC278*

Coordinates:

Latitude:	<i>38.08791853</i>
Longitude:	<i>-121.38967829</i>
UTM Northing:	<i>4,216,794.19</i>
UTM Easting:	<i>641,217.47</i>
UTM Zone:	<i>UTM Zone 10S</i>

Elevation: *8 FT*

Order Information:

Order No: *20200211204*

Date Requested: *February 11, 2020*

Requested by: *Geosyntec Consultants*

Report Type: *Database Report*

Historicals/Products:

Aerial Photographs	<i>Historical Aerials (Boundaries)</i>
City Directory Search	<i>CD - 2 Street Search</i>
ERIS Xplorer	<i>ERIS Xplorer</i>
Excel Add-On	<i>Excel Add-On</i>
Fire Insurance Maps	<i>US Fire Insurance Maps</i>
Physical Setting Report (PSR)	<i>Physical Setting Report (PSR)</i>
Topographic Map	<i>Topographic Maps</i>

Executive Summary: Report Summary

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
<u>Standard Environmental Records</u>								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	1	-	1
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA CESQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	1	-	-	1
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	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
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	1	0	0	1
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0
SWAT	Y	0.5	0	0	0	0	-	0
LDS	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
SWRCB SWF	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
UST CLOSURE	Y	0.5	0	0	0	0	-	0
HHSS	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
TANK OIL GAS	Y	0.25	0	0	0	-	-	0
DELISTED TNK	Y	0.25	0	0	0	-	-	0
CERS TANK	Y	0.25	0	0	0	-	-	0
LUR	Y	0.5	0	0	0	0	-	0
HLUR	Y	0.5	0	0	0	0	-	0
DEED	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	1	0	-	1
CLEANUP SITES	Y	0.5	0	0	0	0	-	0
DELISTED COUNTY	Y	0.25	0	0	0	-	-	0
DELISTED CTNK	Y	0.25	0	0	0	-	-	0
HIST TANK	Y	0.25	0	0	0	-	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED ILST	Y	0.5	0	0	0	0	-	0
DELISTED IUST	Y	0.25	0	0	0	-	-	0
County								
SJ SML	Y	0.5	0	0	0	7	-	7
SAN JOAQUIN SWF	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
SAN JOAQUIN LOP	Y	0.5	0	0	0	0	-	0
SANJOAQUIN UST	Y	0.25	0	0	0	-	-	0
SANJOAQUIN AST	Y	0.25	0	0	1	-	-	1

Additional Environmental Records

Federal

PFAS NPL	Y	0.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER CONTAM	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCB	Y	0.5	0	0	0	0	-	0

State

DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DRYC GRANT	Y	0.25	0	0	0	-	-	0
PFAS	Y	0.5	0	0	0	0	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0
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
DTSC HWF	Y	0.5	0	0	0	0	-	0
INSP COMP ENF	Y	1	0	0	0	0	0	0
SCH	Y	1	0	0	0	0	0	0
CHMIRS	Y	PO	0	-	-	-	-	0
HAZNET	Y	PO	0	-	-	-	-	0
HIST CHMIRS	Y	PO	0	-	-	-	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HIST CORTESE	Y	0.5	0	0	0	0	-	0
CDO/CAO	Y	0.5	0	0	0	0	-	0
CERS HAZ	Y	0.125	0	0	-	-	-	0
DELISTED HAZ	Y	0.5	0	0	0	0	-	0
GEOTRACKER	Y	0.125	0	0	-	-	-	0
WASTE DISCHG	Y	0.25	0	0	0	-	-	0
EMISSIONS	Y	0.25	0	0	0	-	-	0
CDL	Y	0.125	0	0	-	-	-	0

Tribal

No Tribal additional environmental record sources available for this State.

County

SJ COMPLAINTS	Y	0.5	0	0	0	2	-	2
SANJOAQUIN HM	Y	0.125	0	0	-	-	-	0
SANJOAQUIN HW	Y	0.125	0	0	-	-	-	0

Total:			0	0	4	10	0	14
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* PO – Property Only

* 'Property and adjoining properties' database search radii are set at 0.25 miles.

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
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No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	SANJOAQUIN AST	NORTHERN CALIF POWER AGENCY	12745 N THORNTON RD LODI CA 95242	E	0.16 / 868.40	4	19
			Facility ID: FA0010481 Program ID Billing Status: PR0536087 Active, billable				
1	RCRA NON GEN	NCPA LEC/STIG	12745 N THORNTON RD LODI CA 95242	E	0.16 / 868.40	4	19
			EPA Handler ID: CAL000443715				
2	VCP	LODI ENERGY CENTER	12745 NORTH THORNTON ROAD LODI CA 95240	E	0.20 / 1,046.13	4	20
			Estor/EPA ID Cleanup Status: 60001169 NO FURTHER ACTION AS OF 2/24/2010				
2	ENVIROSTOR	LODI ENERGY CENTER	12745 NORTH THORNTON ROAD LODI CA 95240	E	0.20 / 1,046.13	4	21
			Estor/EPA ID Cleanup Status: 60001169 NO FURTHER ACTION AS OF 2/24/2010				
3	SJ COMPLAINTS		12751 N THORNTON RD 12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	22
			Record ID: CO9REGF9Z				
3	SJ COMPLAINTS		12751 THORNTON RD 12751 THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	23
			Record ID: CO0037009				
3	SJ SML	NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	23
3	SJ SML	WHITE SLOUGH WATER POLLUTION CONTRO	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	23
3	SJ SML	NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	24
3	SJ SML	NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	24
3	SJ SML	WHITE SLOUGH WWTP	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	25
3	SJ SML	CITY OF LODI-WHITE SLOUGH PONDS	12751 THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	25

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
<u>3</u>	SJ SML	NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	5	<u>25</u>
<u>3</u>	RCRA TSD	NCPA LODI STIG	12751 N THORNTON RD LODI CA 95242-9509 <i>EPA Handler ID:</i> CAR000004333	ENE	0.27 / 1,424.78	5	<u>26</u>

Executive Summary: Summary by Data Source

Standard

Federal

RCRA TSD - RCRA non-CORRACTS TSD Facilities

A search of the RCRA TSD database, dated Nov 18, 2019 has found that there are 1 RCRA TSD site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
NCPA LODI STIG	12751 N THORNTON RD LODI CA 95242-9509	ENE	0.27 / 1,424.78	<u>3</u>
<i>EPA Handler ID: CAR000004333</i>				

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Nov 18, 2019 has found that there are 1 RCRA NON GEN site(s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
NCPA LEC/STIG	12745 N THORNTON RD LODI CA 95242	E	0.16 / 868.40	<u>1</u>
<i>EPA Handler ID: CAL000443715</i>				

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Jan 15, 2020 has found that there are 1 ENVIROSTOR site(s) within approximately 1.00 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
LODI ENERGY CENTER	12745 NORTH THORNTON ROAD LODI CA 95240	E	0.20 / 1,046.13	<u>2</u>
<i>Estor/EPA ID Cleanup Status: 60001169 NO FURTHER ACTION AS OF 2/24/2010</i>				

VCP - Voluntary Cleanup Program

A search of the VCP database, dated Jan 15, 2020 has found that there are 1 VCP site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
LODI ENERGY CENTER	12745 NORTH THORNTON ROAD LODI CA 95240	E	0.20 / 1,046.13	<u>2</u>
<i>Estor/EPA ID Cleanup Status: 60001169 NO FURTHER ACTION AS OF 2/24/2010</i>				

County

SJ SML - San Joaquin County - Site Mitigation List

A search of the SJ SML database, dated Nov 27, 2019 has found that there are 7 SJ SML site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
WHITE SLOUGH WATER POLLUTION CONTRO	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
CITY OF LODI-WHITE SLOUGH PONDS	12751 THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
NCPA LODI ENERGY CENTER	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>
WHITE SLOUGH WWTP	12751 N THORNTON RD LODI CA	ENE	0.27 / 1,424.78	<u>3</u>

SANJOAQUIN AST - San Joaquin County - Aboveground Tank List

A search of the SANJOAQUIN AST database, dated Nov 27, 2019 has found that there are 1 SANJOAQUIN AST site(s) within approximately 0.25 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
NORTHERN CALIF POWER AGENCY	12745 N THORNTON RD LODI CA 95242	E	0.16 / 868.40	<u>1</u>
<i>Facility ID: FA0010481</i> <i>Program ID Billing Status: PR0536087 Active, billable</i>				

Non Standard

County

SJ COMPLAINTS - San Joaquin County - Complaints and Incident Reports

A search of the SJ COMPLAINTS database, dated Nov 27, 2019 has found that there are 2 SJ COMPLAINTS site(s) within approximately 0.50 miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
	12751 N THORNTON RD 12751 N THORNTON RD LODI CA Record ID: CO9REGF9Z	ENE	0.27 / 1,424.78	<u>3</u>
	12751 THORNTON RD 12751 THORNTON RD LODI CA Record ID: CO0037009	ENE	0.27 / 1,424.78	<u>3</u>

121°24'30"W

121°24'W

121°23'30"W

121°23'W

121°22'30"W

38°6'N

38°6'N

38°5'30"N

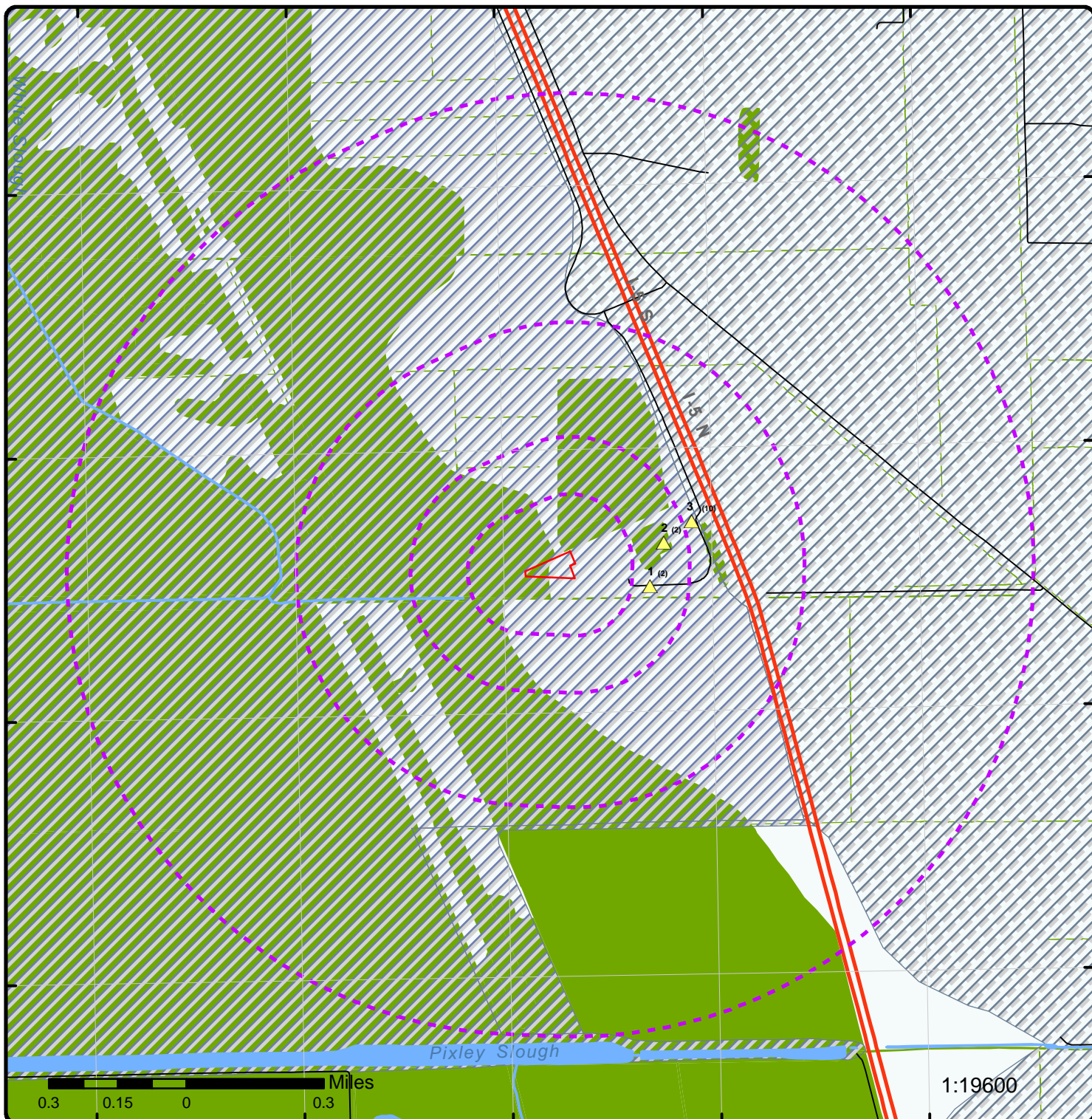
38°5'30"N

38°5'N

38°5'N

38°4'30"N

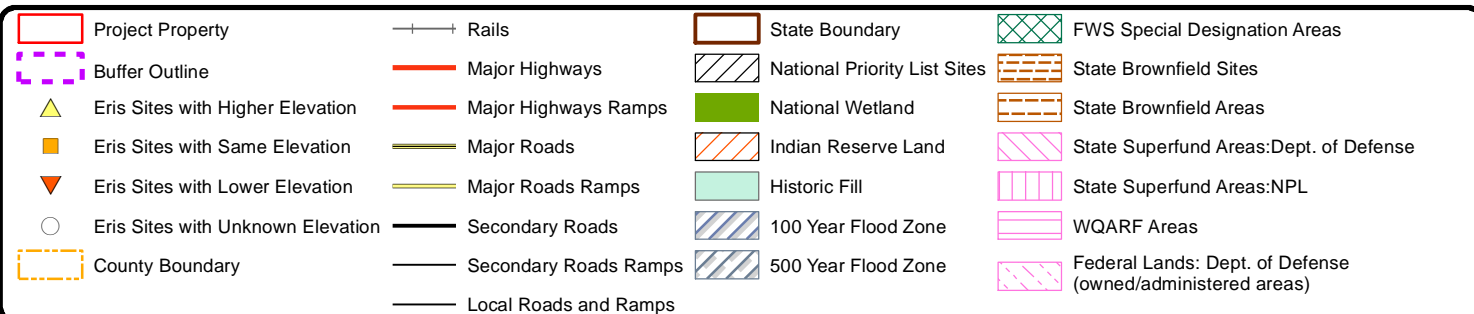
38°4'30"N

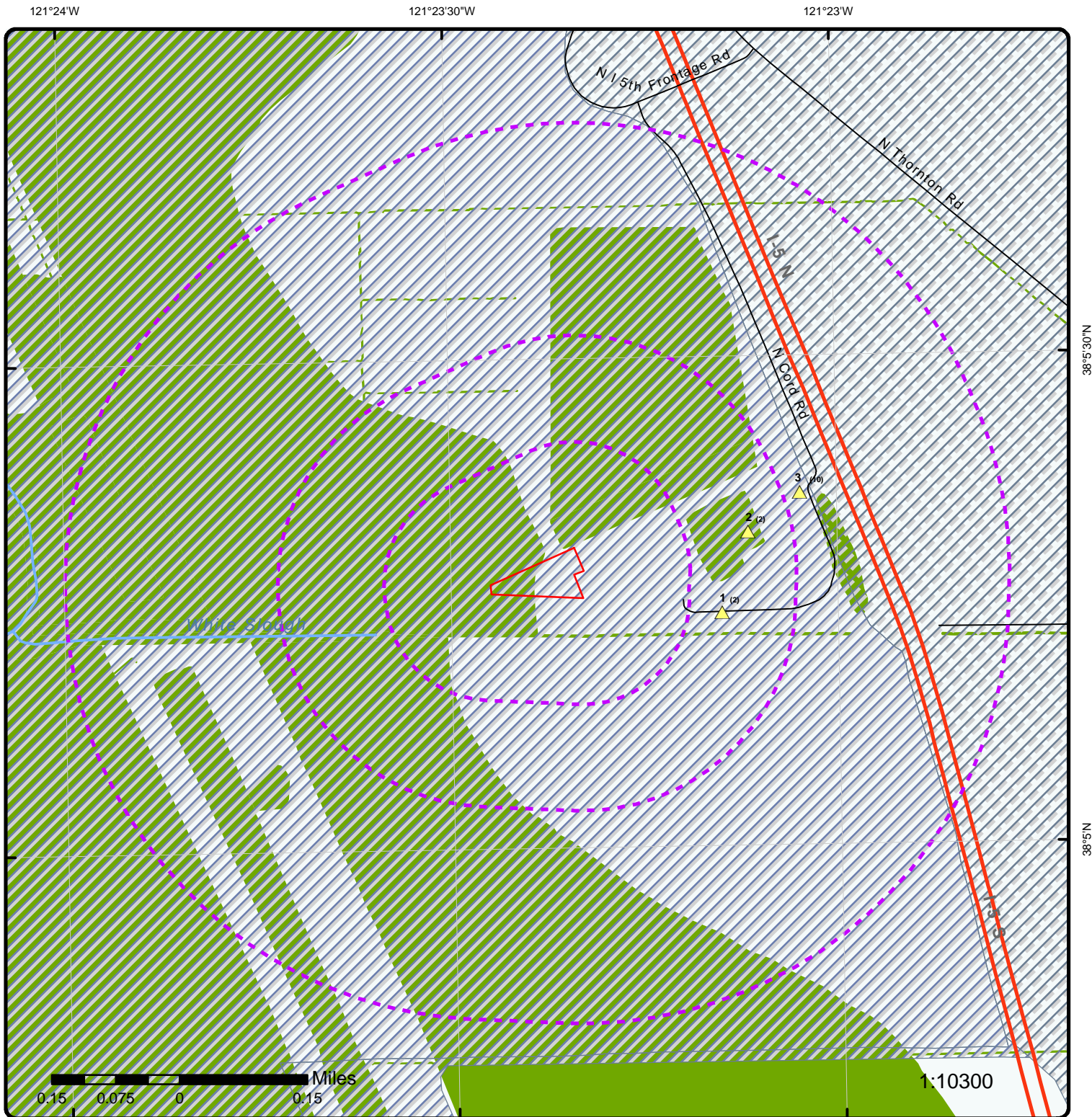


Map : 1.0 Mile Radius

Order Number: 20200211204

Address: NCPA LEC Site, Lodi, CA





Map : 0.5 Mile Radius

Order Number: 20200211204

Address: NCPA LEC Site, Lodi, CA



Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		



Map : 0.25 Mile Radius

Order Number: 20200211204

Address: NCPA LEC Site, Lodi, CA



Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas: Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas: NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

121°24'W

121°23'30"W

121°23'W

38°53'0"N

38°53'0"N

38°5'N

38°5'N

0.1 0.05 0 0.1 Miles

1:10000

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Aerial Year: 2018

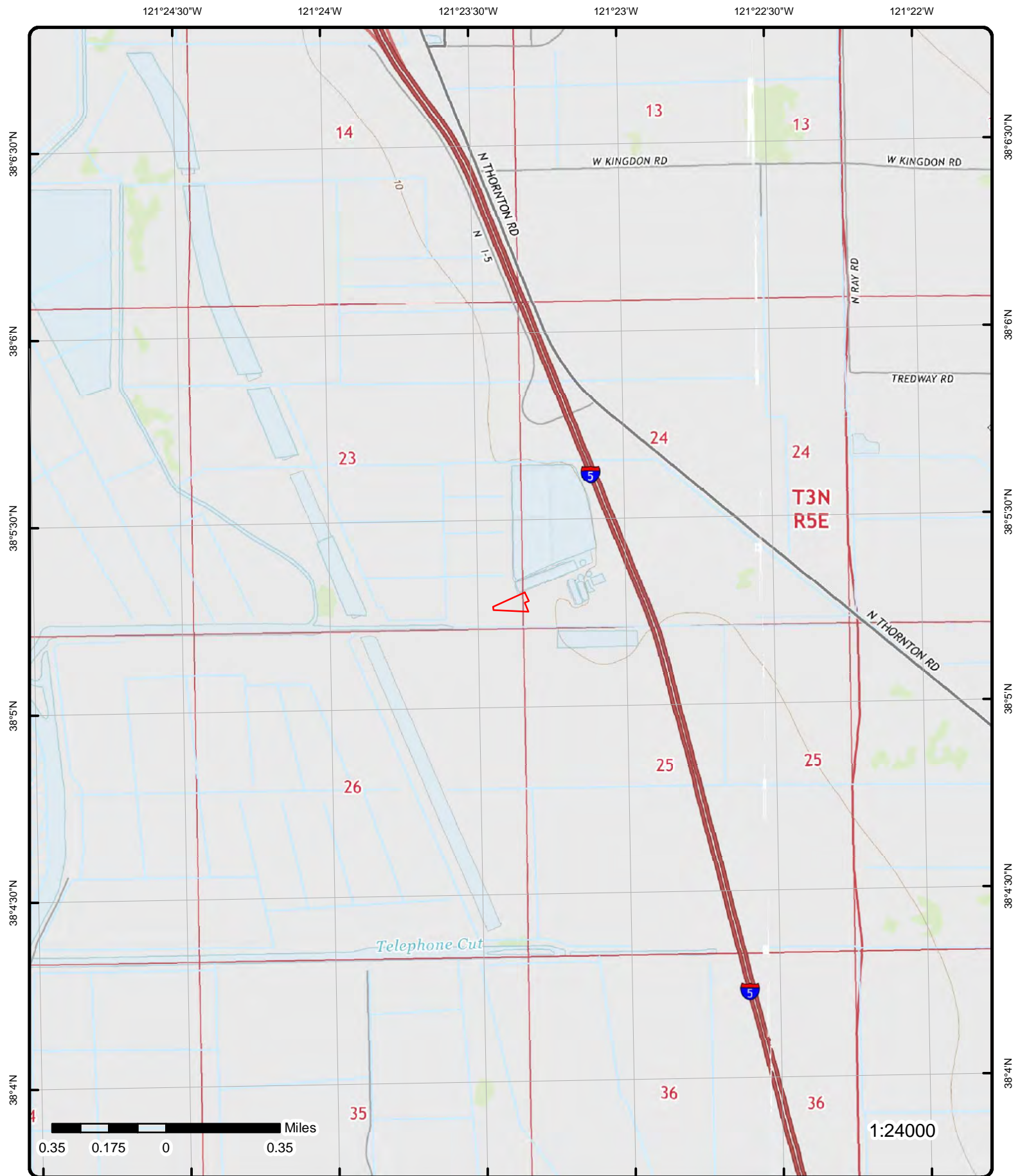
Address: NCPA LEC Site, Lodi, CA

Source: ESRI World Imagery

Order Number: 20200211204



© ERIS Information Inc.



Topographic Map

Year: 2015

Address: NCPA LEC Site, CA

Quadrangle(s): Terminous, CA; Lodi South, CA

Source: USGS Topographic Map

Order Number: 20200211204



© ERIS Information Inc.

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 2	E	0.16 / 868.40	11.52 / 4	NORTHERN CALIF POWER AGENCY 12745 N THORNTON RD LODI CA 95242	SANJOAQUIN AST
<div> <div> Facility ID: FA0010481 CERS ID: 10183585 APN: Phone: 2093336373 Email: vinnie.venethongkham@ncpagen.com </div> <div> Owner: NORTHERN CALIFORNIA POWER AGENCY H Phone: W Phone: 2093336373 Latitude: 38.0873164817 Longitude: -121.3853428381 </div> </div>						

AST List

Program ID: PR0536087
Billing Status: Active, billable
Program Element Desc: AST FAC >= 1,320 - <10 K GAL CUMULATIVE

1	2 of 2	E	0.16 / 868.40	11.52 / 4	NCPA LEC/STIG 12745 N THORNTON RD LODI CA 95242	RCRA NON GEN
<div> <div> EPA Handler ID: CAL000443715 Gen Status Universe: No Report Contact Name: BROOKLYN SAYLOR Contact Address: 12745 N THORNTON RD , , LODI , CA, 95242 , Contact Phone No and Ext: 209-210-5009 Contact Email: BROOKLYN.SAYLOR@NCP.COM Contact Country: County Name: SAN JOAQUIN EPA Region: 09 Land Type: Receive Date: 20190214 </div> </div>						

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, 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: Yes
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

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190214
Handler Name: NCPA LEC/STIG
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Other	Street 1:	651 COMMERCE DR
Name:	NCPA INC	Street 2:	
Date Became Current:		City:	ROSEVILLE
Date Ended Current:		State:	CA
Phone:	916-521-0047	Country:	
Source Type:	Implementer	Zip Code:	95678

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Other	Street 1:	12745 N THORNTON RD
Name:	BROOKLYN SAYLOR	Street 2:	
Date Became Current:		City:	LODI
Date Ended Current:		State:	CA
Phone:	209-210-5009	Country:	
Source Type:	Implementer	Zip Code:	95242

2	1 of 2	E	0.20 / 1,046.13	11.89 / 4	LODI ENERGY CENTER 12745 NORTH THORNTON ROAD LODI CA 95240	VCP
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Estor/EPA ID:	60001169	Permit Renewal Lead:	
Site Code:	102011	Project Manager:	
Nat Priority List:	NO	Supervisor:	STEVEN BECKER
Acres:	4.4 ACRES	Public Partici Spclst:	
Special Program:	VOLUNTARY CLEANUP PROGRAM	Census Tract:	6077004001
Funding:	SITE PROPONENT	County:	SAN JOAQUIN
Assembly District:	13	Latitude:	38.0886682871276
Senate District:	05	Longitude:	-121.385289430618
School District:			
APN:	NONE SPECIFIED		
Cleanup Status:	NO FURTHER ACTION AS OF 2/24/2010		
Cleanup Oversight Agencies:	DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY		
Site Type:	VOLUNTARY CLEANUP		
Office:	CLEANUP SACRAMENTO		
Past Use that Caused Contam:	AGRICULTURAL - ROW CROPS, WASTE - SEWAGE TREATMENT PLANT, WASTE - SEWAGE TREATMENT PONDS, WASTE WATER PONDS		
Potential Media Affected:	SOIL		
Site History:			

The Lodi Energy Center (LEC) property (Site) is located at 12745 North Thornton Road, Lodi, San Joaquin County, California 95240. The Northern California Power Agency is proposing to construct a gas-fired generating station on the Site property and has submitted an Application for Certification to the California Energy Commission for approval of the proposed project. The Site property is owned by the City of Lodi and consists of a 4.4 acre parcel that is located within the City's existing White Slough Water Pollution Control Facility (WPCF) and described as a portion of the San Joaquin County Assessor's Parcel Number (APN) 055-139-16. Prior to the early 1960's, the Site property was used for agricultural purposes, and has been used periodically since the 1980's for the stockpiling of bio-solids/sludge removed from storage ponds at the adjacent WPCF. Preliminary environmental investigations indicate the presence of elevated concentrations of metals, total petroleum hydrocarbons, polynuclear aromatic hydrocarbons and organochlorine pesticides in the Site's surface soils.

Potential Contaminant of Concern:

NO CONTAMINANTS FOUND

Status: NO FURTHER ACTION
Program Type: VOLUNTARY CLEANUP

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
CalEnviroScreen Score:		66-70%				
Summary Link:		http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60001169				
<u>Completed Activities</u>						
Title:		Final VCA				
Title Link:		http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&enforcement_id=6017250				
Area Name:						
Area Link:						
Sub Area:						
Sub Area Link:						
Document Type:		Voluntary Cleanup Agreement				
Date Completed:		9/3/2009				
Comments:						
Title:		Preliminary Endangerment Assesment Report				
Title Link:		http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&doc_id=6028122				
Area Name:						
Area Link:						
Sub Area:						
Sub Area Link:						
Document Type:		Preliminary Endangerment Assessment Report				
Date Completed:		12/10/2009				
Comments:		DTSC issues No Further Action (NFA) Letter for the Site property.				
Title:		Preliminary Endangerment Assessment Lodi Energy Center				
Title Link:		http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&enforcement_id=60188120				
Area Name:						
Area Link:						
Sub Area:						
Sub Area Link:						
Document Type:		No Further Action Letter				
Date Completed:		12/10/2009				
Comments:						
Title:		Preliminary Endangerment Assessment Workplan				
Title Link:		http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&doc_id=6028121				
Area Name:						
Area Link:						
Sub Area:						
Sub Area Link:						
Document Type:		Preliminary Endangerment Assessment Workplan				
Date Completed:		9/3/2009				
Comments:						

2	2 of 2	E	0.20 / 1,046.13	11.89 / 4	LODI ENERGY CENTER 12745 NORTH THORNTON ROAD LODI CA 95240	ENVIROSTOR
Estor/EPA ID:	60001169			Assembly District:	13	
Site Code:	102011			Senate District:	05	
Nat Priority List:	NO			Permit Renewal Lead:		
APN:	NONE SPECIFIED			Public Partici Spclst:		
Census Tract:	6077004001			Project Manager:		
Site Type:	VOLUNTARY CLEANUP			County:	SAN JOAQUIN	
Address Description:	12745 NORTH THORNTON ROAD			Latitude:	38.0886682871276	
Office:	CLEANUP SACRAMENTO			Longitude:	-121.385289430618	
Special Program:	VOLUNTARY CLEANUP PROGRAM			Acres:	4.4 ACRES	
Funding:	SITE PROPONENT			Supervisor:	STEVEN BECKER	
Cleanup Status:	NO FURTHER ACTION AS OF 2/24/2010					
Cleanup Oversight Agencies:	DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY					
School District:						
Past Use that Caused Contam:	AGRICULTURAL - ROW CROPS, WASTE - SEWAGE TREATMENT PLANT, WASTE - SEWAGE TREATMENT PONDS, WASTE WATER PONDS					
Potential Media Affected:	SOIL					
Potential Contamin of Concern:						

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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NO CONTAMINANTS FOUND

Site History:

The Lodi Energy Center (LEC) property (Site) is located at 12745 North Thornton Road, Lodi, San Joaquin County, California 95240. The Northern California Power Agency is proposing to construct a gas-fired generating station on the Site property and has submitted an Application for Certification to the California Energy Commission for approval of the proposed project. The Site property is owned by the City of Lodi and consists of a 4.4 acre parcel that is located within the City's existing White Slough Water Pollution Control Facility (WPCF) and described as a portion of the San Joaquin County Assessor's Parcel Number (APN) 055-139-16. Prior to the early 1960's, the Site property was used for agricultural purposes, and has been used periodically since the 1980's for the stockpiling of bio-solids/sludge removed from storage ponds at the adjacent WPCF. Preliminary environmental investigations indicate the presence of elevated concentrations of metals, total petroleum hydrocarbons, polynuclear aromatic hydrocarbons and organochlorine pesticides in the Site's surface soils.

Status: NO FURTHER ACTION
Program Type: VOLUNTARY CLEANUP
CalEnviroScreen Score: 66-70%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60001169

Completed Activities

Title: Preliminary Endangerment Assessment Workplan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&doc_id=6028121
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Workplan
Date Completed: 9/3/2009
Comments:

Title: Preliminary Endangerment Assessment Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&doc_id=6028122
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Report
Date Completed: 12/10/2009
Comments: DTSC issues No Further Action (NFA) Letter for the Site property.

Title: Final VCA
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&enforcement_id=6017250
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Voluntary Cleanup Agreement
Date Completed: 9/3/2009
Comments:

Title: Preliminary Endangerment Assessment Lodi Energy Center
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60001169&enforcement_id=60188120
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: No Further Action Letter
Date Completed: 12/10/2009
Comments:

3	1 of 10	ENE	0.27 / 1,424.78	12.32 / 5	12751 N THORNTON RD 12751 N THORNTON RD LODI CA	SJ COMPLAINTS
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Facility ID: CO9REGF9Z
Record ID: **Prop Bus Name:** City of Lodi
Postal Code: 95242

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
APN: Prog Element Code: 2546 Received Date: 10/25/2017 Update Date: 12/10/2018 Assigned Date: 10/25/2017 12:00:00 AM Program Element: Release/Spill Response (excluding Joint Team) Description: A tote containing Ferric Chlorite solution is leaking into the ground.						
Prop Owner Name: Assigned to: CESAR RUVALCABA Updated By: LTURKATTE2 Entered By: Entered Date: 10/25/2017						
<u>3</u>	2 of 10	ENE	0.27 / 1,424.78	12.32 / 5	12751 THORNTON RD 12751 THORNTON RD LODI CA	SJ COMPLAINTS
Facility ID: Record ID: CO0037009 APN: ROW Prog Element Code: 2548 Received Date: 9/17/2013 Update Date: 9/26/2013 Assigned Date: 9/18/2013 12:00:00 AM Program Element: Non-Release Response-HazCat/Chemical Pickup Description: REPORT CAME THRU PUBLIC WORKS OF 4 QTS WASTE OIL ABANDONED ON SIDE OF ROAD						
Prop Bus Name: Postal Code: 95242 Prop Owner Name: UNKNOWN Assigned to: ROBERT LOPEZ Updated By: DMARTINEZ2 Entered By: Entered Date: 9/18/2013						
<u>3</u>	3 of 10	ENE	0.27 / 1,424.78	12.32 / 5	NCPA LODI ENERGY CENTER 12751 N THORNTON RD LODI CA	SJ SML
Facility ID: FA0018998 Site Mitigation List (PR) APN: 05513016 GIS Latitude: GIS Longitude: Facility Name: NCPA LODI ENERGY CENTER Facility Address: 12751 N THORNTON RD City: LODI State: CA Zip: 95242 Description: ENVIRON ASSESS Program ID: PR0528038 Billing Status: Active, billable						
Owner Name: CITY OF LODI Phone: Email: Cers ID: PE: 2950						
<u>3</u>	4 of 10	ENE	0.27 / 1,424.78	12.32 / 5	WHITE SLOUGH WATER POLLUTION CONTRO 12751 N THORNTON RD LODI CA	SJ SML
Facility ID: FA0012817 Site Mitigation List (PR) APN: 05513016 GIS Latitude: 38.0886219202 GIS Longitude: -121.3853221367 Facility Name: WHITE SLOUGH WATER POLLUTION CONTRO Facility Address: 12751 N THORNTON RD City: LODI State: CA Zip: 95241						
Owner Name: LODI CITY OF Phone: 2093336800 Email:						

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Description:	RWQCB LEAD AGENCY WASTE DISCHARGE SITE	Cers ID:				
Program ID:	PR0516806	PE:		2965		
Billing Status:	Active, billable					

Site Mitigation List (RO)

APN:	05513016
Record ID 1:	SD0002103
Bus Name:	WHITE SLOUGH WPCF
Facility Address:	12751 N THORNTON RD
City:	LODI
State:	CA
Zip:	95242-
GIS Latitude:	
GIS Longitude:	

Description:	RWQCB LEAD AGENCY WASTE DISCHARGE SITE	Record ID 2:	RO0002138
Status:		CERS ID:	
Status Beg:		PE:	2965
Status End:			

3	5 of 10	ENE	0.27 / 1,424.78	12.32 / 5	NCPA LODI ENERGY CENTER 12751 N THORNTON RD LODI CA	SJ SML
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Facility ID:

Site Mitigation List (RO)

APN:	05513016
Record ID 1:	SD0001933
Bus Name:	NCPA LODI ENERGY CENTER
Facility Address:	12751 N THORNTON RD
City:	LODI
State:	CA
Zip:	95242
GIS Latitude:	
GIS Longitude:	

Description:	ENVIRON ASSESS	Record ID 2:	RO0001955
Status:		CERS ID:	
Status Beg:		PE:	2950
Status End:			

3	6 of 10	ENE	0.27 / 1,424.78	12.32 / 5	NCPA LODI ENERGY CENTER 12751 N THORNTON RD LODI CA	SJ SML
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Facility ID:

Site Mitigation List (RO)

APN:	05513016
Record ID 1:	SD0001886
Bus Name:	NCPA LODI ENERGY CENTER
Facility Address:	12751 N THORNTON RD
City:	LODI
State:	CA
Zip:	95242
GIS Latitude:	
GIS Longitude:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Description:		ENVIRON ASSESS		Record ID 2:	RO0001905	
Status:				CERS ID:		
Status Beg:				PE:	2950	
Status End:						

3	7 of 10	ENE	0.27 / 1,424.78	12.32 / 5	WHITE SLOUGH WWTP 12751 N THORNTON RD LODI CA	SJ SML
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Facility ID:

Site Mitigation List (RO)

APN: 05513016
Record ID 1: SD0001599
Bus Name: WHITE SLOUGH WWTP
Facility Address: 12751 N THORNTON RD
City: LODI
State: CA
Zip: 95242
GIS Latitude:
GIS Longitude:

Description:	RWQCB LEAD AGENCY WASTE DISCHARGE SITE	Record ID 2:	RO0001599
Status:		CERS ID:	
Status Beg:		PE:	2965
Status End:			

3	8 of 10	ENE	0.27 / 1,424.78	12.32 / 5	CITY OF LODI-WHITE SLOUGH PONDS 12751 THORNTON RD LODI CA	SJ SML
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Facility ID: FA0012711

Site Mitigation List (PR)

APN:		Owner Name:	LODI CITY OF
GIS Latitude:		Phone:	2093336832
GIS Longitude:		Email:	
Facility Name:	CITY OF LODI-WHITE SLOUGH PONDS		
Facility Address:	12751 THORNTON RD		
City:	LODI		
State:	CA		
Zip:	95240		

Description:	ENVIRON ASSESS	Cers ID:	
Program ID:	PR0516618	PE:	2950
Billing Status:	Active, billable		

3	9 of 10	ENE	0.27 / 1,424.78	12.32 / 5	NCPA LODI ENERGY CENTER 12751 N THORNTON RD LODI CA	SJ SML
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Facility ID:

Site Mitigation List (RO)

APN: 05513016
Record ID 1: SD0001933
Bus Name: NCPA LODI ENERGY CENTER
Facility Address: 12751 N THORNTON RD

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
City:		LODI				
State:		CA				
Zip:		95242				
GIS Latitude:						
GIS Longitude:						
Description:	ENVIRON ASSESS			Record ID 2:	RO0001994	
Status:				CERS ID:		
Status Beg:				PE:	2950	
Status End:						

3	10 of 10	ENE	0.27 / 1,424.78	12.32 / 5	NCPA LODI STIG 12751 N THORNTON RD LODI CA 95242-9509	RCRA TSD
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EPA Handler ID: CAR000004333
Gen Status Universe: No Report
Contact Name: BROOKLYN SAYLOR
Contact Address: 12745 N THORNTON RD , , LODI , CA, 95242 ,
Contact Phone No and Ext: 209-210-5009
Contact Email: BROOKLYN.SAYLOR@NCPA.COM
Contact Country:
Land Type:
County Name: SAN JOAQUIN
EPA Region: 09
Receive Date: 19951208

Violation/Evaluation Summary

Note: NO RECORDS: As of November 2019, 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: Yes
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

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19950714
Handler Name: N CA POWER AGENCY
Generator Status Universe: No Report
Source Type: Notification

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19951208
Handler Name: NCPA LODI STIG

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Other	Street 1:	651 COMMERCE DRIVE
Name:	NORTHERN CALIFORNIA POWER AGEN	Street 2:	
Date Became Current:		City:	ROSEVILLE
Date Ended Current:		State:	CA
Phone:	916-781-3636	Country:	
Source Type:	Implementer	Zip Code:	95678-6420

Owner/Operator Ind:	Current Owner	Street No:	
Type:	Municipal	Street 1:	180 CIRBY WY
Name:	NORTHERN CALIFORNIA POWER AGENCY	Street 2:	
Date Became Current:		City:	ROSEVILLE
Date Ended Current:		State:	CA
Phone:	916-781-3636	Country:	
Source Type:	Notification	Zip Code:	95678-5420

Owner/Operator Ind:	Current Operator	Street No:	
Type:	Other	Street 1:	12745 N THORNTON RD
Name:	BROOKLYN SAYLOR	Street 2:	
Date Became Current:		City:	LODI
Date Ended Current:		State:	CA
Phone:	209-210-5009	Country:	
Source Type:	Implementer	Zip Code:	95242

Historical Handler Details

Receive Dt:	19950714
Generator Code Description:	Small Quantity Generator
Handler Name:	N CA POWER AGENCY

Unplottable Summary

Total: 26 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
SJ COMPLAINTS		0 N THORNTON RD 0 N THORNTON RD <i>Record ID:</i> CO0045875	LODI CA		867074967
SJ COMPLAINTS		THORNTON THORNTON <i>Record ID:</i> CO0017731	LODI CA		864661982
SJ COMPLAINTS	PAUL TRUCKING	N I-5 BT N I-5 <i>Record ID:</i> CO0004832	LODI CA		864665449
SJ COMPLAINTS		I-5 I-5 <i>Record ID:</i> CO0043743	CA		864665317
SJ COMPLAINTS		I-5 I-5 <i>Record ID:</i> CO0006527	LODI CA		864665265
SJ COMPLAINTS		S I-5 S I-5 <i>Record ID:</i> CO0014526	LODI CA		864664928
SJ COMPLAINTS		THORNTON RD THORNTON RD <i>Record ID:</i> CO0039579	LODI CA		864664834
SJ COMPLAINTS		I-5 I-5 <i>Record ID:</i> CO0003168	LODI CA		864664757
SJ COMPLAINTS		THORNTON RD THORNTON RD <i>Record ID:</i> CO0036830	LODI CA		864664495
SJ COMPLAINTS		0 N THORNTON RD 0 N THORNTON RD <i>Record ID:</i> CO0046019	LODI CA		867075042
SJ COMPLAINTS		S I-5 S I-5 <i>Record ID:</i> CO0042227	CA		864664022

SJ COMPLAINTS	N THORNTON RD N THORNTON RD	LODI CA	864664013
	Record ID: CO0035665		
SJ COMPLAINTS	THORNTON RD THORNTON RD	LODI CA	864664003
	Record ID: CO0037200		
SJ COMPLAINTS	I-5 I-5	CA	864663934
	Record ID: CO0038762		
SJ COMPLAINTS	SB I-5 S SB I-5	LODI CA	864662866
	Record ID: CO0027181		
SJ COMPLAINTS	I-5 RD I-5 RD	LODI CA	864662815
	Record ID: CO0018396		
SJ COMPLAINTS	S I-5 S I-5	CA	864662480
	Record ID: CO0043340		
SJ COMPLAINTS	THORNTON RD THORNTON RD	LODI CA	864664008
	Record ID: CO0036289		
SJ COMPLAINTS	I-5 I-5	LODI CA	864662449
	Record ID: CO0029016		
SJ COMPLAINTS	I-5 I-5	LODI CA	864662173
	Record ID: CO0026642		
SJ COMPLAINTS	N I-5 N I-5	LODI CA	864662114
	Record ID: CO0025694		
SJ COMPLAINTS	N I-5 N I-5	CA	864662059
	Record ID: CO0042308		
SJ COMPLAINTS	I-5 I-5	CA	864662042
	Record ID: CO0005483		
SJ COMPLAINTS	0 THORNTON RD 0 THORNTON RD	LODI CA	867075027
	Record ID: CO0046844		

SJ COMPLAINTS

THORNTON RD THORNTON RD

LODI CA

864661168

Record ID: CO0042030

SJ SML

PROPOSED LOVES
TRAVEL STOPS &
STORE

N THORNTON RD

LODI CA

864762490

Unplottable Report

Site: 0 N THORNTON RD 0 N THORNTON RD LODI CA SJ COMPLAINTS

Facility ID:	CO0045875	Prop Bus Name:	
Record ID:	NEAR 05519005	Postal Code:	95242
APN:	2548	Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	JAMIE LIMA
Received Date:	2/28/2018	Updated By:	DSEDRA
Update Date:	3/6/2018	Entered By:	
Assigned Date:	3/5/2018 12:00:00 AM	Entered Date:	2/28/2018
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	THORNTON ROAD SOUTH OF DE VRIES ROAD, NEXT TO TRASH PILE IS A 2.5 GALLON COVERED CONTAINER OF UNKNOWN SUBSTANCE. NOT LEAKING.		

Site: THORNTON THORNTON LODI CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0017731	Postal Code:	
APN:		Prop Owner Name:	
Prog Element Code:	2546	Assigned to:	DENNIS CATANYAG
Received Date:	7/12/2002	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	7/12/2002 12:00:00 AM	Entered Date:	7/12/2002
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	DIESEL SPILL DUE TO PUNCTURED TANK. (DRIVER: DONALD EDWARD LUKE)		

Site: PAUL TRUCKING
N I-5 BT N I-5 LODI CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0004832	Postal Code:	
APN:		Prop Owner Name:	PAUL TRUCKING
Prog Element Code:	2547	Assigned to:	HARLIN KNOLL
Received Date:	10/17/1995	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	10/17/1995 12:00:00 AM	Entered Date:	10/17/1995
Program Element:	Release Response STANDBY (Not in Use 8-2014)		
Description:	DIESEL SPILL DUE TO VEHICLE ACCIDENT. H KNOLL RESPONDED. 10/18/95- ENVIRON PUR CLEANUP SPILL ABATE		

Site: I-5 I-5 CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	Cliff Patton
Record ID:	CO0043743	Postal Code:	95202
APN:		Prop Owner Name:	Cliff Patton
Prog Element Code:	2546	Assigned to:	ELIANNA FLORIDO
Received Date:	7/3/2017	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	7/3/2017 12:00:00 AM	Entered Date:	7/3/2017
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	APPROXIMATELY 40 GALLONS OF DIESEL FUEL RELEASED FROM A RUPTURED SIDE SADDLE TANK OF A SEMI TRUCK. THE RELEASE IS CONTAINED AND IT IS BELIEVED THAT CALTRANS WILL BE CONDUCTING THE CLEAN UP. THE RELEASED FUEL IMPACTED THE ROAD SURFACE, SOIL ON THE SIDE		

OF THE ROAD, AND ENTERED INTO A DRAIN WHICH IS BELIEVED TO LEAD TO A CALTRANS PUMP HOUSE.

Site: I-5 I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0006527	Postal Code:	
APN:		Prop Owner Name:	WESTERN METAL LATH
Prog Element Code:	2547	Assigned to:	HARLIN KNOLL
Received Date:	7/22/1996	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	7/22/1996 12:00:00 AM	Entered Date:	7/23/1996
Program Element:	Release Response STANDBY (Not in Use 8-2014)		
Description:	25 GALLON DIESEL FUEL SPILLED FROM BROKEN FUEL TANK TO SOIL OF ROAD. RICH MART TO EXCAVATE CONTAMINATED SOIL FOR PROPER DISPOSAL. H.K. RESP DRIVER: DANIEL MICHAEL AUSTIN; LICENSE # A0877053 ADDRESS: 457 WILSON CIRCLE, CORONA, CA 91719 9/17/96 COMPLAINT ABATED		

Site: S I-5 S I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0014526	Postal Code:	
APN:		Prop Owner Name:	
Prog Element Code:	2547	Assigned to:	MICHAEL KITH
Received Date:	7/22/2000	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	7/22/2000 12:00:00 AM	Entered Date:	7/24/2000
Program Element:	Release Response STANDBY (Not in Use 8-2014)		
Description:	VEHICLE CARRYING PESTICIDES OVERTURNED		

Site: THORNTON RD THORNTON RD Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0039579	Postal Code:	95242
APN:	ROW	Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	JAMIE LIMA
Received Date:	4/23/2015	Updated By:	DSEDRA
Update Date:	6/1/2015	Entered By:	
Assigned Date:	4/23/2015 12:00:00 AM	Entered Date:	4/24/2015
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	4 TO 5 CONTAINERS OF UNKNOWN LIQUID.		

Site: I-5 I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0003168	Postal Code:	
APN:		Prop Owner Name:	KEITH HANSON,JOHN M SEMPE
Prog Element Code:	2546	Assigned to:	HARLIN KNOLL
Received Date:	1/10/1995	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	1/10/1995 12:00:00 AM	Entered Date:	1/10/1995
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	50 GAL DIESEL SPILL DUE TO JACK-KNIFED TRUCK - HK RESPONDED W/OES,CHP 1/10/95-RESPONDED TO SPILL;MET W/OES & CHP/ DIESEL SHEEN WASHED RAIN; FILED PROP 65;COMPLETED REPORT		

Site:

Facility ID:		Prop Bus Name:	
Record ID:	CO0036830	Postal Code:	95242
APN:	ROW	Prop Owner Name:	UNKNOWN
Prog Element Code:	2548	Assigned to:	MICHAEL PARISSI
Received Date:	8/16/2013	Updated By:	DMARTINEZ2
Update Date:	9/26/2013	Entered By:	
Assigned Date:	8/16/2013 12:00:00 AM	Entered Date:	8/19/2013
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	ABANDONED CONTAINER UNKNOWN CONTENTS		

Site:

0 N THORNTON RD 0 N THORNTON RD Lodi CA

SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0046019	Postal Code:	95219
APN:	NEAR 05520001	Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	NICHOLAS LOEHRER
Received Date:	3/21/2018	Updated By:	DSEDRA
Update Date:	7/26/2018	Entered By:	
Assigned Date:	3/26/2018 12:00:00 AM	Entered Date:	3/21/2018
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	BOAT AND A 5-GALLON CONTAINER WITH LID ABANDONED ON SIDE OF ROAD. CONTAINER NOT LEAKING. LOCATED ON THORNTON RD APPROXIMATELY 500 FEET SOUTH OF DE VRIES RD.		

Site:

S I-5 S I-5 CA

SJ COMPLAINTS

Facility ID:		Prop Bus Name:	TW TRANSPORT INC C/O JOHN BROWN CLAIM #1609TWT0252
Record ID:	CO0042227	Postal Code:	
APN:		Prop Owner Name:	TW TRANSPORT INC
Prog Element Code:	2546	Assigned to:	LISA MEDINA
Received Date:	9/13/2016	Updated By:	LBROWN
Update Date:	2/10/2017	Entered By:	
Assigned Date:	9/13/2016 12:00:00 AM	Entered Date:	9/13/2016
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	TRACTOR TRAILER RAN OVER DEBRIS IN THE ROAD PUNCTURING A SADDLE TANK, RESULTING IN RELEASE OF 30 GALLONS OF DIESEL ON THE ROAD AND SOIL ON THE SHOULDER.		

Site:

N THORNTON RD N THORNTON RD Lodi CA

SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0035665	Postal Code:	95242
APN:	IN THE STREET	Prop Owner Name:	UNKNOWN
Prog Element Code:	2548	Assigned to:	MICHAEL PARISSI
Received Date:	11/8/2012	Updated By:	MPARISSI
Update Date:	12/28/2012	Entered By:	
Assigned Date:	11/8/2012 12:00:00 AM	Entered Date:	11/8/2012
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	ABANDONED CONTAINERS UNKNOWN		

Site:

THORNTON RD THORNTON RD Lodi CA

SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0037200	Postal Code:	95242
APN:		Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	LOWELL ALLEN
Received Date:	10/29/2013	Updated By:	TLOWE2
Update Date:	11/12/2013	Entered By:	
Assigned Date:	10/29/2013 12:00:00 AM	Entered Date:	10/29/2013

Program Element: Non-Release Response-HazCat/Chemical Pickup
Description: SEVERAL USED OIL FILTERS WERE ABANDONED ON THE SIDE OF THE ROAD.

Site: I-5 I-5 CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	YRC - REDAWAY TRUCKING
Record ID:	CO0038762	Postal Code:	
APN:	ROW	Prop Owner Name:	YRC
Prog Element Code:	2546	Assigned to:	JEFFREY WONG
Received Date:	10/24/2014	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	10/24/2014 12:00:00 AM	Entered Date:	10/24/2014
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	PETROLEUM SPILLED AT REFERENCED LOCATION BY REFERENCED COMPANY BIG RIG.		

Site: SB I-5 S SB I-5 LODI CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0027181	Postal Code:	
APN:		Prop Owner Name:	
Prog Element Code:	2546	Assigned to:	MICHELLE HENRY
Received Date:	10/19/2007	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	10/19/2007 12:00:00 AM	Entered Date:	10/19/2007
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	SEMI-TRUCK LOST A TIRE AND POSSIBLY DESTROYED A FUEL LINE. 40-50 GALLONS OF FUEL WENT INTO THE DIRT AND 25 GALLONS OF THE FUEL WENT INTO THE ROADWAY. PARC ENVIRONMENTAL IS CLEANING UP THE SPILL.		

Site: I-5 RD I-5 RD LODI CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0018396	Postal Code:	95240
APN:		Prop Owner Name:	UNITED PARCEL SERVICE
Prog Element Code:	2546	Assigned to:	RAYMOND VON FLUE
Received Date:	12/9/2002	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	12/9/2002 12:00:00 AM	Entered Date:	12/9/2002
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	TRUCK OVERTURNED, POSSIBLE DIESEL SPILL.		

Site: S I-5 S I-5 CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0043340	Postal Code:	
APN:		Prop Owner Name:	
Prog Element Code:	2546	Assigned to:	MICHELLE HENRY
Received Date:	4/22/2017	Updated By:	DSEDRA
Update Date:	8/17/2017	Entered By:	
Assigned Date:	4/24/2017 12:00:00 AM	Entered Date:	4/24/2017
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	COLLISION BETWEEN BIG RIG AND PASSENGER VEHICLE RESULTED IN DIESEL FUEL SPILL OF APPROXIMATELY 75 TO 100 GALLONS. CHP REPORT #17-2967.		

Site: THORNTON RD THORNTON RD LODI CA SJ COMPLAINTS

Facility ID: **Prop Bus Name:**

Record ID:	CO0036289	Postal Code:	95242
APN:	ROW	Prop Owner Name:	UNKNOWN
Prog Element Code:	2548	Assigned to:	ARIS VELOSO
Received Date:	4/18/2013	Updated By:	DMARTINEZ
Update Date:	5/21/2013	Entered By:	
Assigned Date:	4/18/2013 12:00:00 AM	Entered Date:	4/18/2013
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	ROAD CREW FOUND A 5 GALLON BUCKET OF UNKNOWN MATERIAL ABANDONED ON THE WEST SIDE OF THE ROAD, WEST OF THE BRIDGE #29C133		

Site: I-5 I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	CARPENTER TRUCKING
Record ID:	CO0029016	Postal Code:	
APN:		Prop Owner Name:	ROBERT LEE CARPENTER
Prog Element Code:	2546	Assigned to:	LINDA TURKATTE
Received Date:	9/8/2008	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	9/9/2008 12:00:00 AM	Entered Date:	9/9/2008
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	TREATED WOOD WASTE, BURNED - TREATED WOOD WASTE, AND DIESEL FUEL SPILLED AS A RESULT OF AN ACCIDENT. AFFECTED AREA: NORTHBOUND LANES, NORTHBOUND ON TURNER ROAD ON RAMP, AND MEDIAN.		

Site: I-5 I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	C.R. ENGLAND
Record ID:	CO0026642	Postal Code:	
APN:		Prop Owner Name:	LARRY JONES
Prog Element Code:	2546	Assigned to:	RAYMOND VON FLUE
Received Date:	7/11/2007	Updated By:	DECADE
Update Date:	3/30/2012	Entered By:	
Assigned Date:	7/11/2007 12:00:00 AM	Entered Date:	7/11/2007
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	A DIESEL SPILL OCCURED ON 6/27/07 RELEASING APPX. 20 GALLONS		

Site: N I-5 N I-5 Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	BUTTON TRANSPORTATION INC
Record ID:	CO0025694	Postal Code:	
APN:		Prop Owner Name:	BC LEASE COMPANY
Prog Element Code:	2546	Assigned to:	MUNIAPPA NAIDU
Received Date:	1/9/2007	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	1/9/2007 12:00:00 AM	Entered Date:	1/9/2007
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	BIG RIG CARRYING PROPANE OVERTURNED WHILE ENTERING NORTH BOUND I-5 AT HIGHWAY 12 AND LEAKED 4 - 5 GALLONS OF ANTIFREEZE.		

Site: N I-5 N I-5 CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	Chandeep Singh
Record ID:	CO0042308	Postal Code:	
APN:		Prop Owner Name:	Chandeep Singh
Prog Element Code:	2546	Assigned to:	LISA MEDINA
Received Date:	9/27/2016	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	9/27/2016 12:00:00 AM	Entered Date:	9/27/2016
Program Element:	Release/Spill Response (excluding Joint Team)		
Description:	COMPLAINANT ALLEGES THAT ON 9/27/2016 AT APPROXIMATELY 3:18 PM THERE WAS A BIG RIG		

ACCIDENT ON THE CENTER DIVIDE. APPROXIMATELY 25 TO 50 GALLONS OF DIESEL SPILLED AND HAS BEEN CONTAINED. NO WATER WAYS OR STORM DRAINS WERE IMPACTED.

Site: I-5 I-5 CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0005483	Postal Code:	
APN:		Prop Owner Name:	GORDON TRUCKING
Prog Element Code:	2547	Assigned to:	MICHAEL KITH
Received Date:	2/7/1996	Updated By:	WNG
Update Date:	4/19/2019	Entered By:	
Assigned Date:	2/7/1996 12:00:00 AM	Entered Date:	2/8/1996
Program Element:	Release Response STANDBY (Not in Use 8-2014)		
Description:	TRUCK ACCIDENT. UNKNOWN AMOUNT OF DIESEL SPILLS. MK RESPONDED. 2/12/96- SEE ER REPORT		

Site: 0 THORNTON RD 0 THORNTON RD Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0046844	Postal Code:	95219
APN:	NEAR 05521005	Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	GARRETT BACKUS
Received Date:	6/6/2018	Updated By:	YMORENO
Update Date:	6/26/2018	Entered By:	
Assigned Date:	6/6/2018 12:00:00 AM	Entered Date:	6/6/2018
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	ON THE EAST SIDE OF THORNTON ROAD, APPROXIMATELY 1,000 FEET NORTH OF EIGHT MILE ROAD ARE 7 ONE GALLON CONTAINERS OF WHAT APPEARS TO BE MOTOR OIL. CONTAINERS DO NOT APPEAR TO HAVE SPILLED OR LEAKED.		

Site: THORNTON RD THORNTON RD Lodi CA SJ COMPLAINTS

Facility ID:		Prop Bus Name:	
Record ID:	CO0042030	Postal Code:	95242
APN:		Prop Owner Name:	
Prog Element Code:	2548	Assigned to:	NICHOLAS LOEHRER
Received Date:	8/9/2016	Updated By:	DSEDRA
Update Date:	9/7/2016	Entered By:	
Assigned Date:	8/9/2016 12:00:00 AM	Entered Date:	8/9/2016
Program Element:	Non-Release Response-HazCat/Chemical Pickup		
Description:	71 GALLON CONTAINERS THAT LOOK LIKE PAINT		

Site: PROPOSED LOVES TRAVEL STOPS & STORE N THORNTON RD Lodi CA SJ SML

Facility ID: FA0020780

Site Mitigation List (PR)

APN:	02519016	Owner Name:	LOVES COUNTRY STORES OF CA
GIS Latitude:		Phone:	
GIS Longitude:		Email:	
Facility Name:	PROPOSED LOVES TRAVEL STOPS & STORE		
Facility Address:	N THORNTON RD		
City:	LODI		
State:	CA		
Zip:	95242		
Description:	ENVIRON ASSESS	Cers ID:	
Program ID:	PR0536161	PE:	2950

Billing Status: Active, billable

Site Mitigation List (RO)

APN: 02519016
Record ID 1: SD0001983
Bus Name: PROPOSED LOVES TRAVEL STOPS & STORE
Facility Address: 15237 N THORNTON RD
City: LODI
State: CA
Zip: 95242
GIS Latitude:
GIS Longitude:

Description: ENVIRON ASSESS
Status:
Status Beg:
Status End:

Record ID 2: RO0002006
CERS ID:
PE: 2950

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, 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

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is 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.

Government Publication Date: Nov 25, 2019

National Priority List - Proposed:

PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Nov 25, 2019

Deleted NPL:

DELETED 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.

Government Publication Date: Nov 25, 2019

SEMS List 8R Active Site Inventory:

SEMS

The 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.

Government Publication Date: Nov 25, 2019

Inventory of Open Dumps, June 1985:

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:

SEMS ARCHIVE

The 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.

Government Publication Date: Nov 25, 2019

EPA Report on the Status of Open Dumps on Indian Lands:

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

Comprehensive Environmental Response, Compensation and Liability Information System -

CERCLIS

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

CERCLIS - No Further Remedial Action Planned:

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:

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).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. 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: Nov 18, 2019

RCRA non-CORRACTS TSD Facilities:

RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Nov 18, 2019

RCRA Generator List:

RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. 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: Nov 18, 2019

RCRA Small Quantity Generators List:

RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. 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: Nov 18, 2019

RCRA Conditionally Exempt and Very Small Quantity Generators List:[RCRA CESQG](#)

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt and Very Small Quantity Generators (VSQG and CESQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG and CESQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Nov 18, 2019

RCRA Non-Generators:[RCRA NON GEN](#)

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. 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: Nov 18, 2019

Federal Engineering Controls-ECs:[FED ENG](#)

Engineering controls (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. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jun 11, 2019

Federal Institutional Controls- ICs:[FED INST](#)

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. Although it is EPA's (United States Environmental Protection Agency) 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.

Government Publication Date: Jun 11, 2019

Emergency Response Notification System:[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:[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:[ERNS](#)

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. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Nov 25, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:[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 database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 3, 2019

FEMA Underground Storage Tank Listing:[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

Petroleum Refineries:

REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Oct 8, 2019

Petroleum Product and Crude Oil Rail Terminals:

BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia 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 that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property:

SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Nov 25, 2019

Superfund Decision Documents:

SUPERFUND ROD

This database contains a listing 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 Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Oct 25, 2019

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 is state equivalent NPL.

Government Publication Date: Jan 15, 2020

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 is state equivalent CERCLIS.

Government Publication Date: Jan 15, 2020

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: Jan 15, 2020

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: Feb 5, 2020

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: Jan 15, 2020

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

Land Disposal Sites:

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: Nov 14, 2019

Leaking Underground Fuel Tank Reports:

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: Nov 14, 2019

Delisted Leaking Storage Tanks:

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 13, 2020

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

Permitted Underground Storage Tank (UST) in GeoTracker:

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 14, 2019

Proposed Closure of Underground Storage Tank Cases:

UST CLOSURE

List of UST cases that are being considered for closure by either the California Environmental Protection Agency, State Water Resources Control Board or the Executive Director that have been posted for a 60-day public comment period.

Government Publication Date: Jan 13, 2020

Historical Hazardous Substance Storage Information Database:

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

Aboveground Storage Tanks:

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

Oil and Gas Facility Tanks:

TANK OIL GAS

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: Jan 30, 2020

Delisted Storage Tanks:

DELISTED TNK

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: Jan 30, 2020

California Environmental Reporting System (CERS) Tanks:

CERS TANK

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: Nov 18, 2019

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions:

LUR

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: Jan 15, 2020

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions:

HLUR

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: Jan 13, 2020

Deed Restrictions and Land Use Restrictions:

DEED

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: Nov 14, 2019

Voluntary Cleanup Program:

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: Jan 15, 2020

GeoTracker Cleanup Program Sites:

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: Nov 14, 2019

Delisted County Records:

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: Feb 4, 2020

Delisted California Environmental Reporting System (CERS) Tanks:

DELISTED CTNK

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: Nov 18, 2019

Historical Hazardous Substance Storage Container Information - Facility Summary:

HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in the 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.

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands:

[INDIAN LUST](#)

LUSTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2019

Underground Storage Tanks (USTs) on Indian Lands:

[INDIAN UST](#)

USTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2019

Delisted Tribal Leaking Storage Tanks:

[DELISTED ILST](#)

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: May 2, 2019

Delisted Tribal Underground Storage Tanks:

[DELISTED IUST](#)

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: May 2, 2019

County

San Joaquin County - Site Mitigation List:

[SJ SML](#)

A list of Site Mitigation sites in San Joaquin County. The county's Site Mitigation Program includes: the permitting and inspection of well installations and destructions at all local, state, and federal assessment and cleanup sites, as well as the oversight of local cleanup of releases pursuant to California Health and Safety, Sections 5412 and 101480. Activities in this program are similar to those in the Local Oversight Program but are directed at cases that do not meet criteria for the LOP and are within the scope of Environmental Health Department (EHD) staff expertise. This list is provided by San Joaquin County EHD.

Government Publication Date: Nov 27, 2019

San Joaquin County - Solid Waste Facilities:

[SAN JOAQUIN SWF](#)

A list of Solid Waste Program Facilities in San Joaquin County. The list is made available by San Joaquin County Environmental Health Department.

Government Publication Date: Nov 27, 2019

San Joaquin County - LOP Sites List:

[SAN JOAQUIN LOP](#)

An archived list of Local Oversight Program clean-up sites in San Joaquin County. The program has since returned to the State of California's oversight. This list is made available by San Joaquin County Environmental Health Department (EHD).

Government Publication Date: Nov 27, 2019

San Joaquin County - UST List:

[SANJOAQUIN UST](#)

A list of registered Underground Storage Tanks in the County of San Joaquin. The list is made available by San Joaquin County Environmental Health Division.

Government Publication Date: Nov 27, 2019

San Joaquin County - Aboveground Tank List:

[SANJOAQUIN AST](#)

A list of Aboveground Storage Tanks (ASTs) inspected by San Joaquin County Environmental Health Department (SJCEHD) under Aboveground Petroleum Storage Act (APSA).

Government Publication Date: Nov 27, 2019

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites:

PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 15, 2019

Facility Registry Service/Facility Index:

FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (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, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Nov 6, 2019

Toxics Release Inventory (TRI) Program:

TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Releases:

PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Water Contamination:

PFAS WATER CONTAM

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Dec 20, 2019

Hazardous Materials Information Reporting System:

HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs:

NCDL

The U.S. Department of Justice ("the Department") 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: Sep 26, 2019

Toxic Substances Control Act:

TSCA

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 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).

Government Publication Date: Jun 30, 2017

Hist TSCA:

HIST TSCA

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](#)

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](#)

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](#)

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Oct 25, 2019

State Coalition for Remediation of Drycleaners Listing:

[SCRD DRYCLEANER](#)

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.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

[ICIS](#)

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Nov 18, 2016

Drycleaner Facilities:

[FED DRYCLEANERS](#)

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities:

[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 29, 2018

Formerly Used Defense Sites:

[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. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS):

[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.

Historic Material Licensing Tracking System (MLTS) sites:

[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:

[MINES](#)

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 6, 2019

Alternative Fueling Stations:

[ALT FUELS](#)

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Jan 8, 2020

Registered Pesticide Establishments:

[SSTS](#)

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: May 31, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

[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: Oct 9, 2019

State

Dry Cleaning Facilities:

[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: Feb 3, 2020

Delisted Drycleaners:

[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: Feb 3, 2020

Non-Toxic Dry Cleaning Incentive Program:

[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: Feb 28, 2018

Per- and Polyfluoroalkyl Substances (PFAS):

[PFAS](#)

List of sites from the State Water Resources Control Board (SWRCB)'s GeoTracker at which one or more of the potential contaminants of concern are in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 14, 2019

PFOA/PFOS Groundwater:

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.Y

Government Publication Date: Jan 15, 2020

Hazardous Waste and Substances Site List - Site Cleanup:

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: Nov 26, 2019

List of Hazardous Waste Facilities Subject to Corrective Action:

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:

INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked in the Department of Toxic Substance Control (DTSC) EnviroStor.

Government Publication Date: Jan 16, 2020

School Property Evaluation Program Sites:

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: Jan 15, 2020

California Hazardous Material Incident Report System (CHMIRS):

CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Oct 23, 2019

Hazardous Waste Manifest Data:

HAZNET

A list of hazardous waste manifests received each year by Department of Toxic Substances Control (DTSC). The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Oct 24, 2016

Historical California Hazardous Material Incident Report System (CHMIRS):

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

Historical Hazardous Waste Manifest Data:

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

Historical Cortese List:

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:

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: Feb 16, 2012

California Environmental Reporting System (CERS) Hazardous Waste Sites:

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: Nov 18, 2019

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites:

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

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: Nov 14, 2019

Waste Discharge Requirements:

WASTE DISCHG

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: Nov 14, 2019

Toxic Pollutant Emissions Facilities:

EMISSIONS

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. This program requires emission inventory updates every four years.

Government Publication Date: Dec 31, 2017

Clandestine Drug Lab Sites:

CDL

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: Jun 30, 2018

Tribal

No Tribal additional environmental record sources available for this State.

County

San Joaquin County - Complaints and Incident Reports:

SJ COMPLAINTS

A list of sites associated with complaints received by San Joaquin County Environmental Health Department, including spill and release reports.

Government Publication Date: Nov 27, 2019

San Joaquin County - Hazardous Materials Facilities List:

SANJOAQUIN HM

A list of Hazardous Materials Facilities in San Joaquin County. This list is made available by San Joaquin County Environmental Health Department which has been designated as the CUPA for the County.

Government Publication Date: Nov 27, 2019

San Joaquin County - Hazardous Waste Facilities:

[SANJOAQUIN HW](#)

A list of Hazardous Waste Facilities in San Joaquin County. This list is made available by San Joaquin County Environmental Health Department which has been designated as the CUPA for the County.

Government Publication Date: Nov 27, 2019

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.



Property Information

Order Number:	20200211204p
Date Completed:	February 12, 2020
Project Number:	SAC278
Project Property:	NCPA Phase I NCPA LEC Site Lodi CA 95242
Coordinates:	
Latitude:	38.08791853
Longitude:	-121.38967829
UTM Northing:	4216794.18954 Meters
UTM Easting:	641217.474341 Meters
UTM Zone:	UTM Zone 10S
Elevation:	7.61 ft
Slope Direction:	W

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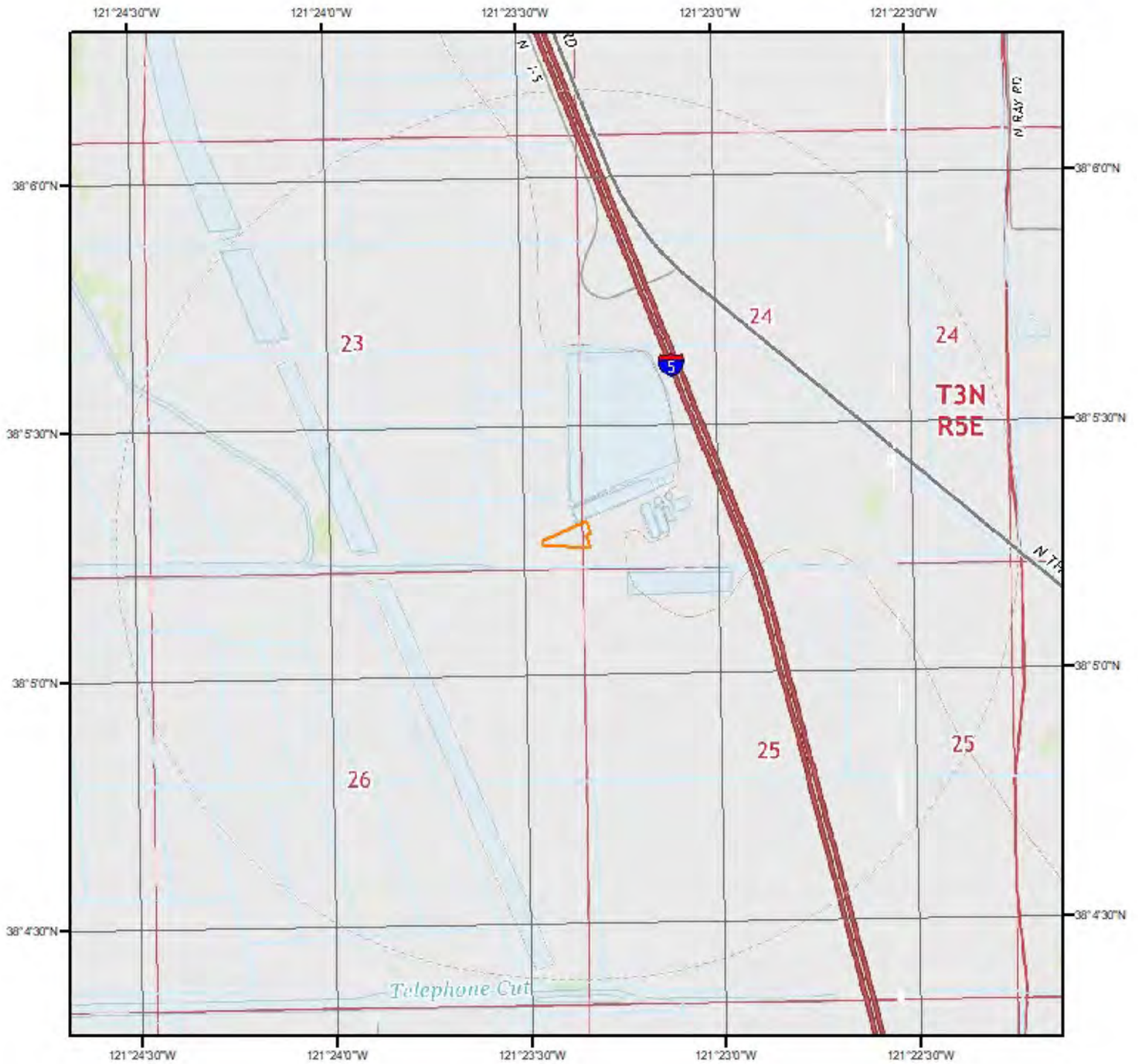
The ERIS **Physical Setting Report - PSR** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.

Topographic Information



Current USGS Topo

Quadrangle(s): Lodi South, CA; Terminous, CA

Source: USGS 7.5 Minute Topographic Map

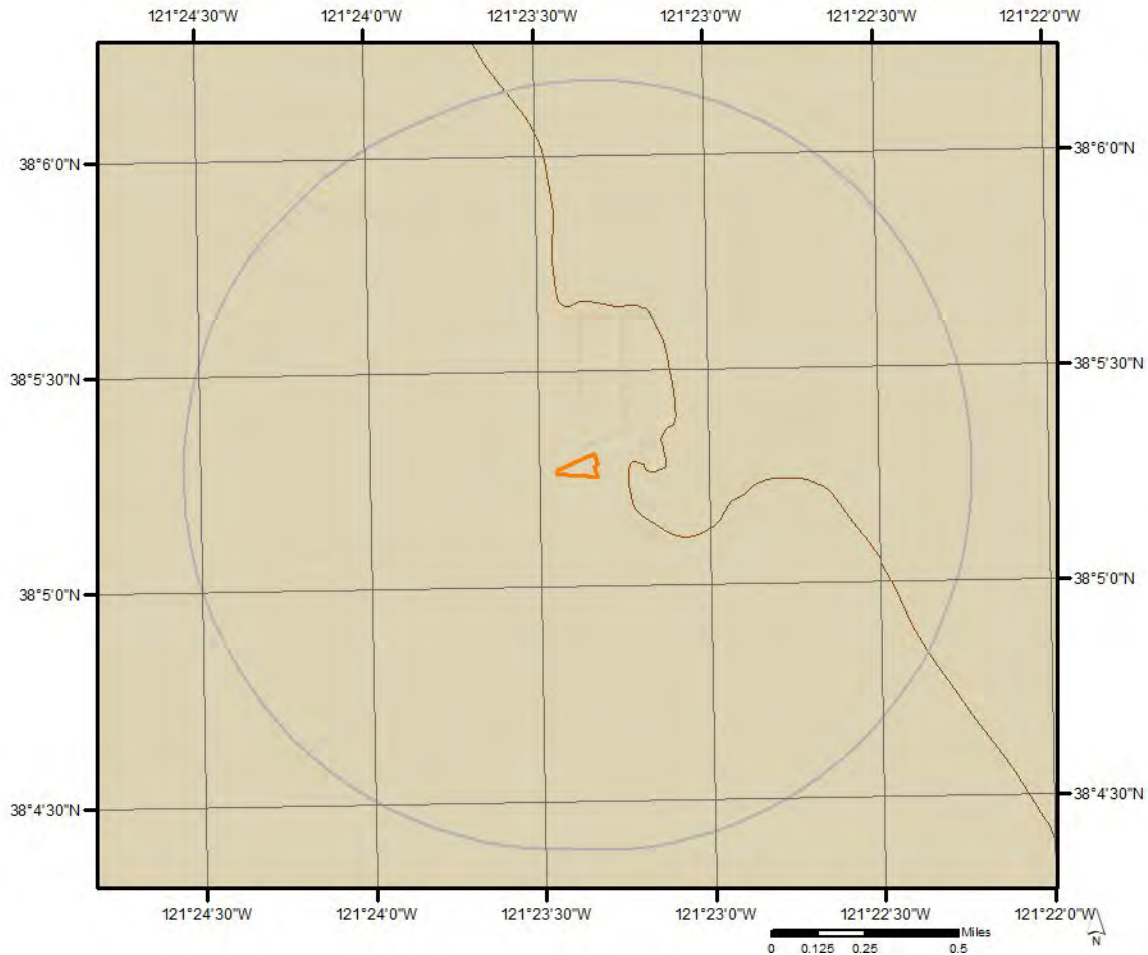


Topographic Information

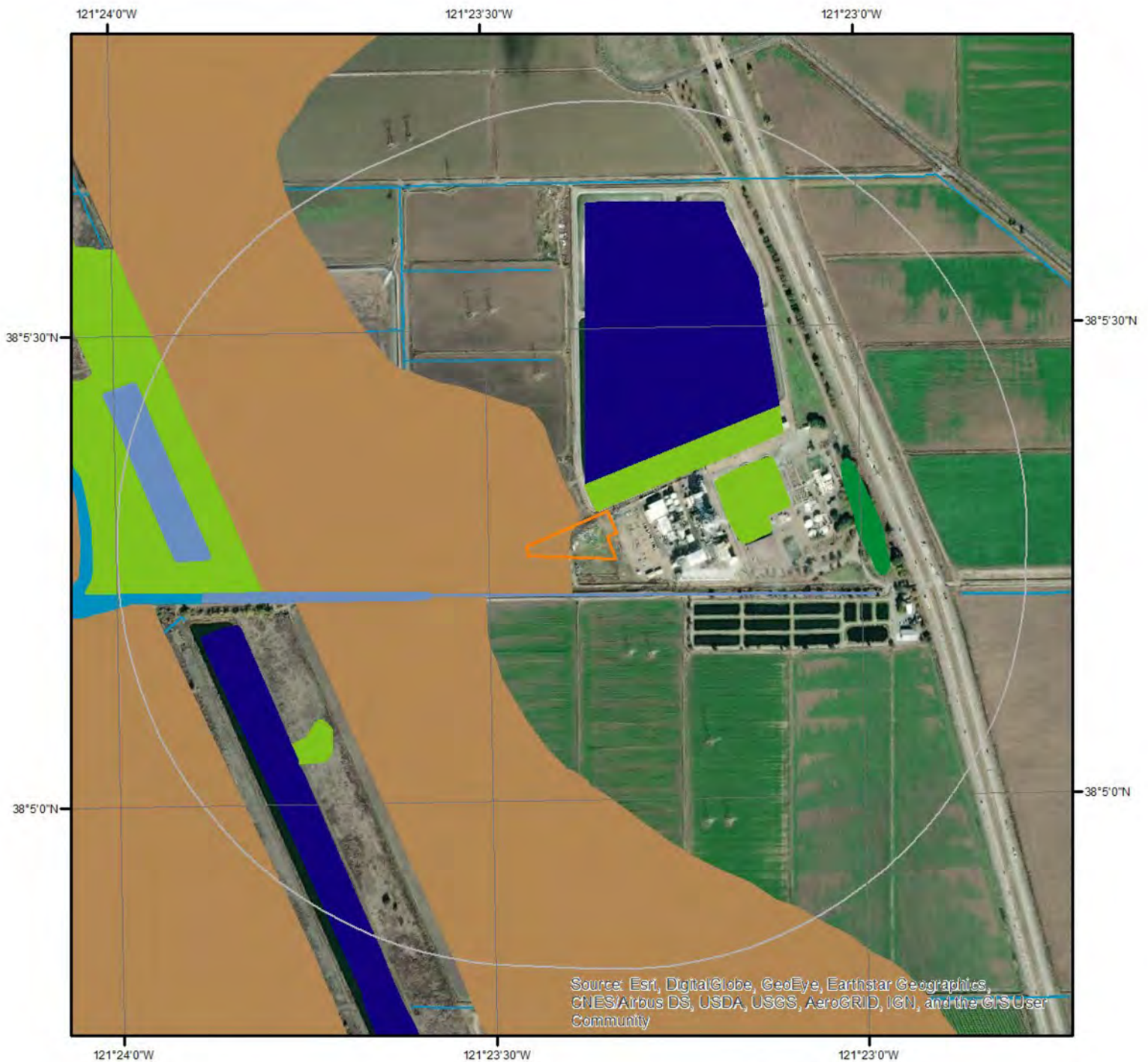
The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

Elevation: 7.61 ft
Slope Direction: W



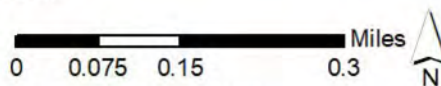
Hydrologic Information



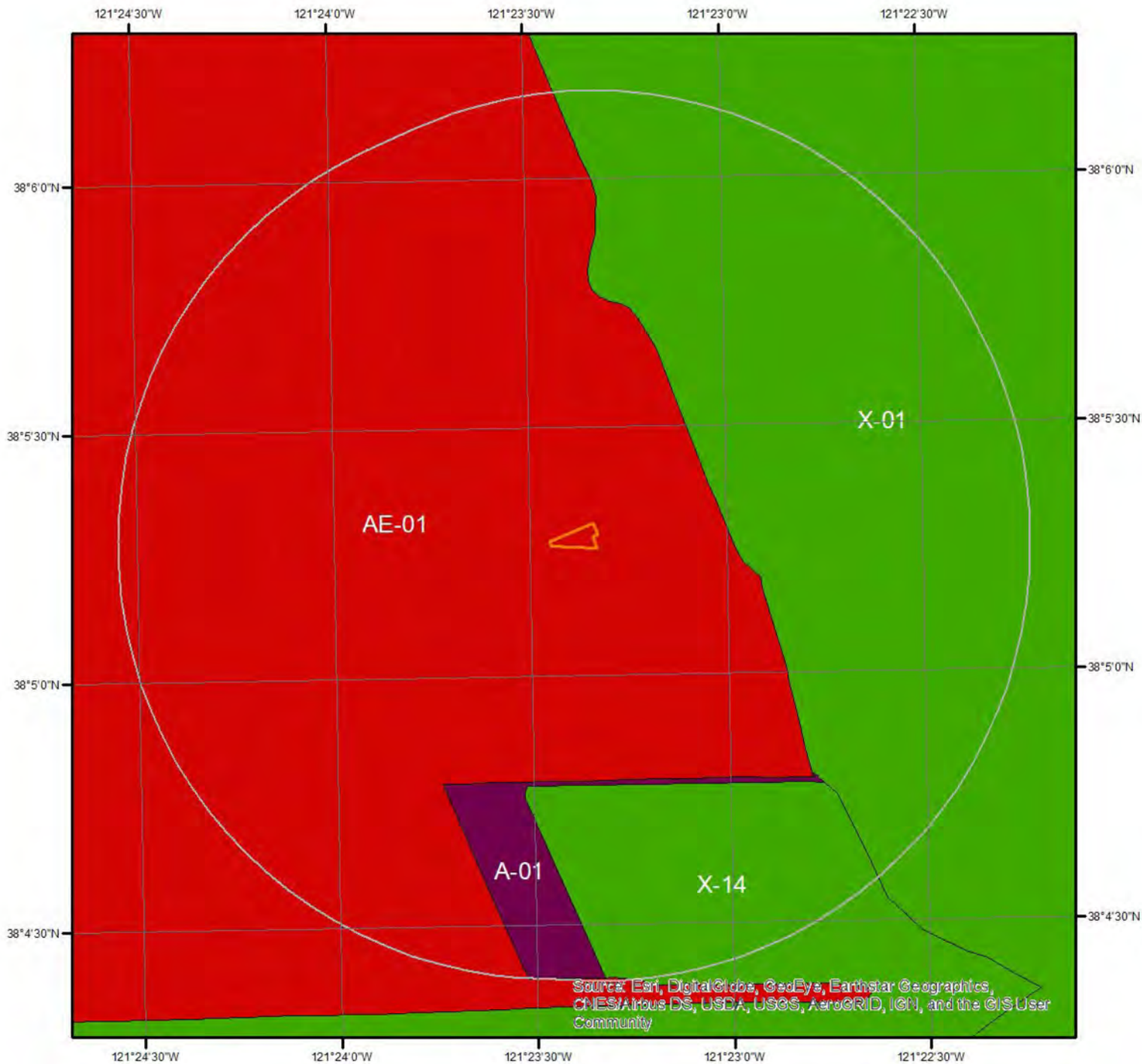
Wetland

This map shows wetland existence using data from US Fish & Wildlife. Data coverage is shown to the right. Gray indicates no data available in the area.

	Estuarine and Marine Deepwater		Freshwater Pond
	Estuarine and Marine Wetland		Lake
	Freshwater Emergent Wetland		Other
	Freshwater Forested/Shrub Wetland		Riverine



Hydrologic Information



Flood Hazard Zones

This map shows FEMA flood hazard zones. FIRM panels are shown to the right, and blank indicates no data is available.

	A		AO		X
	A99		V		OPEN WATER
	AE		VE		NOT POPULATED
	AH		D		AREA NOT INCLUDED

0 0.2 0.4 Miles



Hydrologic Information

The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below.

Available FIRM Panels in area: 06077C0285F(effective:2009-10-16) 06077C0305F(effective:2009-10-16)

Flood Zone A-01

Zone: A

Zone subtype:

Flood Zone AE-01

Zone: AE

Zone subtype:

Flood Zone X-01

Zone: X

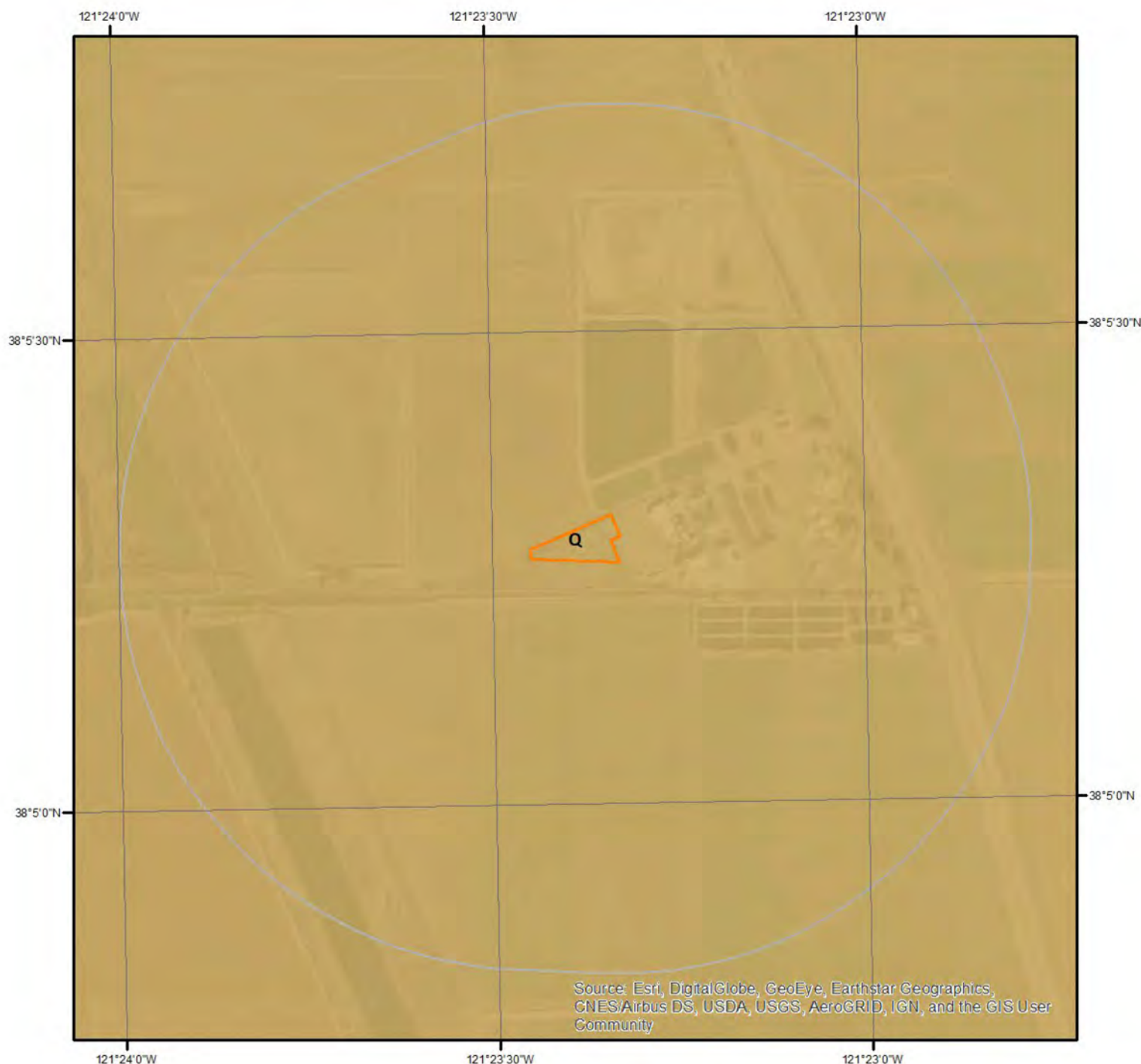
Zone subtype: 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

Flood Zone X-14

Zone: X

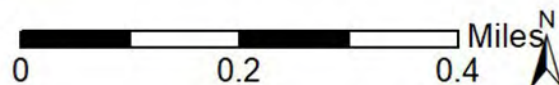
Zone subtype: AREA WITH REDUCED FLOOD RISK DUE TO LEVEE

Geologic Information



Geologic Units

This maps shows geologic units in the area. Please refer to the report for detailed descriptions.



Geologic Information

The previous page shows USGS geology information. Detailed information about each unit is provided below.

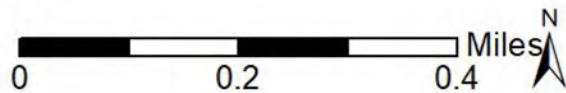
Geologic Unit Q

Unit Name:	Quaternary alluvium and marine deposits
Unit Age:	Pliocene to Holocene
Primary Rock Type:	alluvium
Secondary Rock Type:	terrace
Unit Description:	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.

Soil Information



SSURGO Soils



This map shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.



Soil Information

The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

Map Unit 149 (21.96%)

Map Unit Name:	Devries sandy loam, drained, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	152cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.
Major components are printed below	
Devries(85%)	
horizon A(0cm to 33cm)	Sandy loam
horizon Bt(33cm to 71cm)	Sandy loam
horizon Bkqm(71cm to 203cm)	Indurated

Map Unit 168 (1.64%)

Map Unit Name:	Guard clay loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.
Major components are printed below	
Guard(85%)	
horizon A(0cm to 38cm)	Clay loam
horizon Bkq(38cm to 183cm)	Clay loam

Map Unit 169 (21.3%)

Map Unit Name:	Guard clay loam, drained, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	152cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.
Major components are printed below	
Guard(85%)	
horizon A(0cm to 38cm)	Clay loam
horizon Bkq(38cm to 183cm)	Clay loam

Map Unit 284 (55.11%)

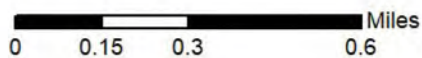
Map Unit Name:	Water
No more attributes available for this map unit	

Wells and Additional Sources



Wells & Additional Sources

- ▲ Sites with Higher Elevation
- Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation



Wells and Additional Sources Summary

Federal Sources

Public Water Systems Violations and Enforcement Data

Map Key	ID	Distance (ft)	Direction
No records found			

Safe Drinking Water Information System (SDWIS)

Map Key	ID	Distance (ft)	Direction
No records found			

USGS National Water Information System

Map Key	Monitoring Loc Identifier	Distance (ft)	Direction
4	USGS-380510121232201	591.49	SSW
6	USGS-380518121230201	1,364.52	E
7	USGS-380517121225801	1,439.23	E
7	USGS-380517121225802	1,439.23	E
12	USGS-380449121232401	2,721.12	S
13	USGS-380531121235401	2,862.04	WNW
16	USGS-380448121234301	3,236.80	SSW
26	USGS-380553121240501	4,977.04	NW

State Sources

Oil and Gas Wells

Map Key	API No	Distance (ft)	Direction
3	0407720568	353.98	ENE
10	0407700509	2,389.35	S
11	0407720290	2,355.69	ENE
24	0407720496	4,050.04	ENE

Periodic Groundwater Level Measurement Locations

Map Key	Site Code	Distance (ft)	Direction
1	380877N1213898W001	0.00	-
8	380903N1213829W001	1,865.48	ENE
9	380814N1213908W001	2,283.19	S
14	380799N1213850W001	3,010.55	SSE
15	380945N1213817W001	2,995.99	NE
17	380943N1213991W001	3,322.43	NW
22	380986N1213869W001	3,746.38	N
25	380751N1213908W001	4,573.21	S

Well Completion Reports

Map Key	WCR No	Distance (ft)	Direction
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Wells and Additional Sources Summary

2	WCR2012-000219	18.12	ESE
5	WCR2012-000218	1,066.87	ENE
18	WCR1970-000033	3,334.38	NE
19	WCR2000-006087	3,409.26	NNE
20	WCR1970-000029	3,385.01	NE
20	WCR1958-000256	3,385.01	NE
20	WCR1967-000254	3,385.01	NE
20	WCR0146854	3,385.01	NE
20	WCR1979-001555	3,385.01	NE
20	WCR1967-000236	3,385.01	NE
20	WCR1994-004295	3,385.01	NE
21	WCR2007-004012	3,808.91	NNW
23	WCR0047228	3,843.34	SE
23	WCR2008-002219	3,843.34	SE
23	WCR2008-002217	3,843.34	SE
23	WCR0242214	3,843.34	SE
23	WCR0019926	3,843.34	SE
23	WCR1997-001626	3,843.34	SE
23	WCR0212947	3,843.34	SE
23	WCR2008-002218	3,843.34	SE
27	WCR2016-006635	5,071.12	E

Wells and Additional Sources Detail Report

USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	SSW	0.11	591.49	8.18	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	27	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN
Construction Date:		Latitude:	38.0860312
Source Map Scale:	24000	Longitude:	-121.3905052
Monitoring Loc Name:	003N005E26A001M		
Monitoring Loc Identifier:	USGS-380510121232201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040003		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:			
Vertical Measure Unit:			
Vertical Accuracy:			
Vertical Accuracy Unit:			
Vertical Collection Mthd:			
Vert Coord Refer System:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	E	0.26	1,364.52	14.65	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN

Wells and Additional Sources Detail Report

Construction Date:		Latitude:	38.0883333
Source Map Scale:	24000	Longitude:	-121.384111
Monitoring Loc Name:	003N006E24N001M		
Monitoring Loc Identifier:	USGS-380518121230201		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040012		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	.5		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	8		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2.5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NAVD88		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.27	1,439.23	15.00	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	142	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	176	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	SAN JOAQUIN
Construction Date:	19700603	Latitude:	38.0879756
Source Map Scale:	24000	Longitude:	-121.3838384
Monitoring Loc Name:	003N005E24P001M		
Monitoring Loc Identifier:	USGS-380517121225801		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040012		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		

Wells and Additional Sources Detail Report

Horizontal Collection Mthd: Interpolated from MAP.
 Horiz Coord Refer System: NAD83
 Vertical Measure: 7.00
 Vertical Measure Unit: feet
 Vertical Accuracy: 2.5
 Vertical Accuracy Unit: feet
 Vertical Collection Mthd: Interpolated from topographic map.
 Vert Coord Refer System: NGVD29

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	E	0.27	1,439.23	15.00	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	104	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	104	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	SAN JOAQUIN
Construction Date:	19670629	Latitude:	38.0879756
Source Map Scale:	24000	Longitude:	-121.3838384
Monitoring Loc Name:	003N005E24P002M		
Monitoring Loc Identifier:	USGS-380517121225802		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040012		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	7.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	2.5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NGVD29		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
12	S	0.52	2,721.12	1.82	FED USGS

Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	30	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN
Construction Date:		Latitude:	38.080198
Source Map Scale:	24000	Longitude:	-121.3910607
Monitoring Loc Name:	003N005E26H001M		
Monitoring Loc Identifier:	USGS-380449121232401		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040003		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:			
Vertical Measure Unit:			
Vertical Accuracy:			
Vertical Accuracy Unit:			
Vertical Collection Mthd:			
Vert Coord Refer System:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	WNW	0.54	2,862.04	0.58	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	30	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN
Construction Date:		Latitude:	38.0918643
Source Map Scale:	24000	Longitude:	-121.3993943
Monitoring Loc Name:	003N005E23L001M		
Monitoring Loc Identifier:	USGS-380531121235401		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040012		

Wells and Additional Sources Detail Report

Drainage Area:
 Drainage Area Unit:
 Contrib Drainage Area:
 Contrib Drainage Area Unit:
 Horizontal Accuracy: 1
 Horizontal Accuracy Unit: seconds
 Horizontal Collection Mthd: Interpolated from MAP.
 Horiz Coord Refer System: NAD83
 Vertical Measure:
 Vertical Measure Unit:
 Vertical Accuracy:
 Vertical Accuracy Unit:
 Vertical Collection Mthd:
 Vert Coord Refer System:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
16	SSW	0.61	3,236.80	0.00	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	21	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN
Construction Date:		Latitude:	38.0799202
Source Map Scale:	24000	Longitude:	-121.3963386
Monitoring Loc Name:	003N005E26K001M		
Monitoring Loc Identifier:	USGS-380448121234301		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040003		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:			
Vertical Measure Unit:			
Vertical Accuracy:			
Vertical Accuracy Unit:			

Wells and Additional Sources Detail Report

Vertical Collection Mthd:

Vert Coord Refer System:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
26	NW	0.94	4,977.04	0.49	FED USGS

Organiz Identifier:	USGS-CA	Formation Type:	
Organiz Name:	USGS California Water Science Center	Aquifer Name:	Central Valley aquifer system
Well Depth:	30	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	SAN JOAQUIN
Construction Date:		Latitude:	38.0979752
Source Map Scale:	24000	Longitude:	-121.4024499
Monitoring Loc Name:	003N005E23D001M		
Monitoring Loc Identifier:	USGS-380553121240501		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	18040012		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:			
Vertical Measure Unit:			
Vertical Accuracy:			
Vertical Accuracy Unit:			
Vertical Collection Mthd:			
Vert Coord Refer System:			

Oil and Gas Wells

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
3	ENE	0.07	353.98	9.85	OGW

API No:	0407720568	Directional:	
All Well Key:		BLM Well:	
OP Well ID:		EPA Well:	
OID:		Operator Code:	06308
Well No:	1	Operator Name:	Northern California Power Agency
Well Status:	Plugged	Operator St:	

Wells and Additional Sources Detail Report

Well Stat Desc:	Plugged	County APIC:	
Well Type:	DH	District:	Northern
Well Type Desc:	Dry Hole	Geo District:	
Well Symbol:	PluggedDH	Field Code:	
Well Sym Desc:		Field Name:	Any Field
Release Date:		Area Code:	
Completion Date:		Area Name:	Any Area
Abandoned Date:		County Name:	San Joaquin
Lease Name:	Lodi Stig	Section:	24
Elevation:		Township:	03N
Total Depth:		Range:	05E
Redrilled Depth:		Lat27:	
Redrill Cancel Flag:		Long27:	
Dryhole:		Lat83:	38.08879089
Confidential:		Long83:	-121.38789368
Confidential Well:	No	Base Meridian:	MD
Directional Drilled:	No	GIS Source Code:	hud
Hydr Fractured:			
Location:			
Source83 Desc:	Heads Up Digitized - Coordinates generated from scanned, geo-referenced, static scale, Mylar maps		
URL:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
10	S	0.45	2,389.35	5.79	OGW

API No:	0407700509	Directional:	
All Well Key:		BLM Well:	
OP Well ID:		EPA Well:	
OID:		Operator Code:	02908
Well No:	1	Operator Name:	Federal Oil Co. of Cal
Well Status:	Plugged	Operator St:	
Well Stat Desc:	Plugged	County APIC:	
Well Type:	DH	District:	Northern
Well Type Desc:	Dry Hole	Geo District:	
Well Symbol:	PluggedDH	Field Code:	
Well Sym Desc:		Field Name:	Any Field
Release Date:		Area Code:	
Completion Date:		Area Name:	Any Area
Abandoned Date:		County Name:	San Joaquin
Lease Name:	Federal Imeson	Section:	26
Elevation:		Township:	03N
Total Depth:		Range:	05E
Redrilled Depth:		Lat27:	
Redrill Cancel Flag:		Long27:	
Dryhole:		Lat83:	38.08103943
Confidential:		Long83:	-121.38951111

Wells and Additional Sources Detail Report

Confidential Well:	No	Base Meridian:	MD
Directional Drilled:	No	GIS Source Code:	hud
Hydr Fractured:			
Location:			
Source83 Desc:	Heads Up Digitized - Coordinates generated from scanned, geo-referenced, static scale, Mylar maps		
URL:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	ENE	0.45	2,355.69	15.47	OGW

API No:	0407720290	Directional:	
All Well Key:		BLM Well:	
OP Well ID:		EPA Well:	
OID:		Operator Code:	G2900
Well No:	1	Operator Name:	Great Basins Petroleum Co.
Well Status:	Plugged	Operator St:	
Well Stat Desc:	Plugged	County APIC:	
Well Type:	DH	District:	Northern
Well Type Desc:	Dry Hole	Geo District:	
Well Symbol:	PluggedDH	Field Code:	
Well Sym Desc:		Field Name:	Any Field
Release Date:		Area Code:	
Completion Date:		Area Name:	Any Area
Abandoned Date:		County Name:	San Joaquin
Lease Name:	City of Lodi	Section:	24
Elevation:		Township:	03N
Total Depth:		Range:	05E
Redrilled Depth:		Lat27:	
Redrill Cancel Flag:		Long27:	
Dryhole:		Lat83:	38.09049988
Confidential:		Long83:	-121.38126373
Confidential Well:	No	Base Meridian:	MD
Directional Drilled:	No	GIS Source Code:	hud
Hydr Fractured:			
Location:			
Source83 Desc:	Heads Up Digitized - Coordinates generated from scanned, geo-referenced, static scale, Mylar maps		
URL:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
24	ENE	0.77	4,050.04	12.26	OGW

API No:	0407720496	Directional:	
All Well Key:		BLM Well:	
OP Well ID:		EPA Well:	
OID:		Operator Code:	D2010
Well No:	65-24	Operator Name:	Maxus Exploration Company

Wells and Additional Sources Detail Report

Well Status:	Plugged	Operator St:	
Well Stat Desc:	Plugged	County APIC:	
Well Type:	DH	District:	Northern
Well Type Desc:	Dry Hole	Geo District:	
Well Symbol:	PluggedDH	Field Code:	
Well Sym Desc:		Field Name:	Any Field
Release Date:		Area Code:	
Completion Date:		Area Name:	Any Area
Abandoned Date:		County Name:	San Joaquin
Lease Name:	Red House Fee	Section:	24
Elevation:		Township:	03N
Total Depth:		Range:	05E
Redrilled Depth:		Lat27:	
Redrill Cancel Flag:		Long27:	
Dryhole:		Lat83:	38.09331131
Confidential:		Long83:	-121.37638855
Confidential Well:	No	Base Meridian:	MD
Directional Drilled:	No	GIS Source Code:	hud
Hydr Fractured:			
Location:			
Source83 Desc:	Heads Up Digitized - Coordinates generated from scanned, geo-referenced, static scale, Mylar maps		
URL:			

Periodic Groundwater Level Measurement Locations

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
1	-	0.00	0.00	7.34	MONITOR WELLS

Site Code:	380877N1213898W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50775	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	20	Basin Region Desc:	Sacramento River
Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 02	County Name:	San Joaquin
Latitude:	38.0877	WLM Method:	GPS
Longitude:	-121.39	WLM Accuracy:	0.1 ft.

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	ENE	0.35	1,865.48	12.31	MONITOR WELLS

Site Code:	380903N1213829W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50777	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	25	Basin Region Desc:	Sacramento River

Wells and Additional Sources Detail Report

Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 08	County Name:	San Joaquin
Latitude:	38.0903	WLM Method:	GPS
Longitude:	-121.383	WLM Accuracy:	0.1 ft.

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
9	S	0.43	2,283.19	4.96	MONITOR WELLS

Site Code:	380814N1213908W001	Basin ID:	
State Well No:	03N05E26H002M	Basin Code:	5-022.01
Station ID:	28710	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	10	Basin Region Desc:	Sacramento River
Well Use:		Basin Region Actv:	Y
Well Type:	Unknown	Basin Region Order:	5
Well Name:		County Name:	San Joaquin
Latitude:	38.0814	WLM Method:	Unknown
Longitude:	-121.391	WLM Accuracy:	Unknown

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	SSE	0.57	3,010.55	7.17	MONITOR WELLS

Site Code:	380799N1213850W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50776	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	20	Basin Region Desc:	Sacramento River
Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 05	County Name:	San Joaquin
Latitude:	38.0799	WLM Method:	GPS
Longitude:	-121.385	WLM Accuracy:	0.1 ft.

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
15	NE	0.57	2,995.99	13.15	MONITOR WELLS

Site Code:	380945N1213817W001	Basin ID:	
State Well No:	03N05E24L001M	Basin Code:	5-022.01
Station ID:	4099	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:		Basin Region Desc:	Sacramento River
Well Use:	Unknown	Basin Region Actv:	Y
Well Type:	Unknown	Basin Region Order:	5
Well Name:		County Name:	San Joaquin

Wells and Additional Sources Detail Report

Latitude:	38.0945	WLM Method:	Unknown
Longitude:	-121.382	WLM Accuracy:	Unknown

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	NW	0.63	3,322.43	1.86	MONITOR WELLS

Site Code:	380943N1213991W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50782	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	20	Basin Region Desc:	Sacramento River
Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 15	County Name:	San Joaquin
Latitude:	38.0943	WLM Method:	GPS
Longitude:	-121.399	WLM Accuracy:	0.1 ft.

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	N	0.71	3,746.38	12.25	MONITOR WELLS

Site Code:	380986N1213869W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50774	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	20	Basin Region Desc:	Sacramento River
Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 01	County Name:	San Joaquin
Latitude:	38.0986	WLM Method:	GPS
Longitude:	-121.387	WLM Accuracy:	0.1 ft.

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
25	S	0.87	4,573.21	0.00	MONITOR WELLS

Site Code:	380751N1213908W001	Basin ID:	
State Well No:		Basin Code:	5-022.01
Station ID:	50781	Basin Name:	Eastern San Joaquin
WCR No:		Basin Region Code:	5
Well Depth:	20	Basin Region Desc:	Sacramento River
Well Use:	Observation	Basin Region Actv:	Y
Well Type:	Single Well	Basin Region Order:	5
Well Name:	Lodi WSM 13	County Name:	San Joaquin
Latitude:	38.0751	WLM Method:	GPS
Longitude:	-121.391	WLM Accuracy:	0.1 ft.

Well Completion Reports

Wells and Additional Sources Detail Report

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	ESE	0.00	18.12	8.53	WATER WELLS

WCR No:	WCR2012-000219	Casing Diameter:	6
Legacy Log No:	0955433	Fluid:	None
APN:	55-130-16	Static Water Level:	17
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2012-01-20 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	100
Received Date:		Well Yield Unit:	GPM
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	240.0	Range:	05E
Test Type:	None	Section:	23
Pump Test Length:	8	LL Accuracy:	None
Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	3
Planned Former Use:	Water Supply Domestic	Vertical Datum:	None
Top Perforated Int:	100	Decimal Latitude:	38.0877778
Bottom Perf Intvl:	220	Decimal Longitude:	-121.3888889
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	12745 THORNTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	ENE	0.20	1,066.87	11.23	WATER WELLS

WCR No:	WCR2012-000218	Casing Diameter:	8
Legacy Log No:	0955432	Fluid:	None
APN:	55-130-16	Static Water Level:	20
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2012-02-02 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	400
Received Date:		Well Yield Unit:	GPM
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	240.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	8	LL Accuracy:	None

Wells and Additional Sources Detail Report

Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	3
Planned Former Use:	Water Supply Industrial	Vertical Datum:	None
Top Perforated Int:	40	Decimal Latitude:	38.0894444
Bottom Perf Intvl:	220	Decimal Longitude:	-121.3855556
Own Assign Well No:	2		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	12751 N THORNTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
18	NE	0.63	3,334.38	11.39	WATER WELLS

WCR No:	WCR1970-000033	Casing Diameter:	16
Legacy Log No:	12463	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1970-09-30 00:00:00	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	111.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	None
Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Irrigation - Agriculture	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0941667
Bottom Perf Intvl:	None	Decimal Longitude:	-121.38
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
19	NNE	0.65	3,409.26	12.15	WATER WELLS

WCR No:	WCR2000-006087	Casing Diameter:	None
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Wells and Additional Sources Detail Report

Legacy Log No:	782956	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2000-11-27 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	None
Pump Test Length:	None	LL Accuracy:	None
Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Other Unused	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	
Bottom Perf Intvl:	None	Decimal Longitude:	
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/Destruction/NA/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	13436 N THORTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1970-000029	Casing Diameter:	12
Legacy Log No:	12455	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1970-06-30 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	176.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Public	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0943
Bottom Perf Intvl:	None	Decimal Longitude:	-121.37991

Wells and Additional Sources Detail Report

Own Assign Well No: None
 Local Permit Agency: San Joaquin County Environmental Health Department
 Record Type: WellCompletion/New/Production or Monitoring/NA
 City: LODI
 Region Office: DWR North Central Region Office
 Well Location: None
 Other Observations: None

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1958-000256	Casing Diameter:	7
Legacy Log No:	35778	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1958-04-25 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	34.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Other Not Specified	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0943
Bottom Perf Intvl:	None	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1967-000254	Casing Diameter:	12
Legacy Log No:	44089	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	39
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1967-06-29 00:00:00	Elev Determine Meth:	None

Wells and Additional Sources Detail Report

Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	100.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	24	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Public	Vertical Datum:	None
Top Perforated Int:	62	Decimal Latitude:	38.0943
Bottom Perf Intvl:	80	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR0146854	Casing Diameter:	None
Legacy Log No:	None	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:		Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	None	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0943
Bottom Perf Intvl:	None	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		

Wells and Additional Sources Detail Report

Well Location: None
Other Observations: None

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1979-001555	Casing Diameter:	6
Legacy Log No:	129569	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1979-04-30 00:00:00	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	153.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Domestic	Vertical Datum:	None
Top Perforated Int:	110	Decimal Latitude:	38.0943
Bottom Perf Intvl:	150	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1967-000236	Casing Diameter:	14
Legacy Log No:	44898	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1967-08-31 00:00:00	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	139.0	Range:	05E

Wells and Additional Sources Detail Report

Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Irrigation - Agriculture	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0943
Bottom Perf Intvl:	None	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	NE	0.64	3,385.01	11.36	WATER WELLS

WCR No:	WCR1994-004295	Casing Diameter:	26
Legacy Log No:	548779	Fluid:	None
APN:	55-XX-XX	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1994-09-15 00:00:00	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	220.0	Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Domestic	Vertical Datum:	None
Top Perforated Int:	100	Decimal Latitude:	38.0943
Bottom Perf Intvl:	140	Decimal Longitude:	-121.37991
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
21	NNW	0.72	3,808.91	7.24	WATER WELLS

Wells and Additional Sources Detail Report

WCR No:	WCR2007-004012	Casing Diameter:	None
Legacy Log No:	e067373	Fluid:	Not Available at Conversion
APN:	55-32-25	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2007-09-20 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	Auger	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	50.0	Range:	05E
Test Type:	None	Section:	11
Pump Test Length:	None	LL Accuracy:	None
Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Monitoring	Vertical Datum:	None
Top Perforated Int:	40	Decimal Latitude:	38.0983333
Bottom Perf Intvl:	50	Decimal Longitude:	-121.3933333
Own Assign Well No:	MW 10-B		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	6437 WEST BANNER RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR0047228	Casing Diameter:	None
Legacy Log No:	None	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:		Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	None	Vertical Datum:	None

Wells and Additional Sources Detail Report

Top Perforated Int:	None	Decimal Latitude:	38.07976
Bottom Perf Intvl:	None	Decimal Longitude:	-121.3799
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR2008-002219	Casing Diameter:	None
Legacy Log No:	e0079937	Fluid:	Not Available at Conversion
APN:	55-14-10	Static Water Level:	17
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2008-08-28 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	Auger	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	28.0	Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Monitoring	Vertical Datum:	None
Top Perforated Int:	8	Decimal Latitude:	38.07976
Bottom Perf Intvl:	28	Decimal Longitude:	-121.3799
Own Assign Well No:	LR-3		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	13436 N THORTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR2008-002217	Casing Diameter:	None
Legacy Log No:	e0079934	Fluid:	Not Available at Conversion
APN:	55-13-1	Static Water Level:	17
Permit No:	None	Total Draw Down:	None

Wells and Additional Sources Detail Report

Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2008-08-28 00:00:00	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	Auger	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	28.0	Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Monitoring	Vertical Datum:	None
Top Perforated Int:	8	Decimal Latitude:	38.07976
Bottom Perf Intvl:	28	Decimal Longitude:	-121.3799
Own Assign Well No:	LR 1		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	13436 THORTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR0242214	Casing Diameter:	None
Legacy Log No:	E0079937	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:		Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	None	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.07976
Bottom Perf Intvl:	None	Decimal Longitude:	-121.3799
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		

Wells and Additional Sources Detail Report

City: None
 Region Office: DWR North Central Region Office
 Well Location: None
 Other Observations: None

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR0019926	Casing Diameter:	None
Legacy Log No:	E0079936	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:		Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	None	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.07976
Bottom Perf Intvl:	None	Decimal Longitude:	-121.3799
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR1997-001626	Casing Diameter:	6
Legacy Log No:	476403	Fluid:	None
APN:	69-70-19	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	1997-08-26 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin

Wells and Additional Sources Detail Report

Total Drill Depth:	None	Township:	03N
Total Complete Depth:	84.0	Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Water Supply Domestic	Vertical Datum:	None
Top Perforated Int:	40	Decimal Latitude:	38.07976
Bottom Perf Intvl:	60	Decimal Longitude:	-121.3799
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	STOCKTON		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	SE	0.73	3,843.34	7.25	WATER WELLS

WCR No:	WCR0212947	Casing Diameter:	None
Legacy Log No:	E0079934	Fluid:	None
APN:	None	Static Water Level:	None
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:		Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	None	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.07976
Bottom Perf Intvl:	None	Decimal Longitude:	-121.3799
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	None		
Region Office:	DWR North Central Region Office		
Well Location:	None		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
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Wells and Additional Sources Detail Report

23	SE	0.73	3,843.34	7.25	WATER WELLS
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WCR No:	WCR2008-002218	Casing Diameter:	None
Legacy Log No:	e0079936	Fluid:	Not Available at Conversion
APN:	55-13-1	Static Water Level:	17
Permit No:	None	Total Draw Down:	None
Permit Date:	None	Elevation Accuracy:	None
Date Work Ended:	2008-08-28 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	None	Well Yield:	None
Received Date:		Well Yield Unit:	None
Drilling Method:	Auger	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:	28.0	Range:	05E
Test Type:	None	Section:	25
Pump Test Length:	None	LL Accuracy:	Centroid of Section
Mth of Determ LL:	Derived from TRS	Baseline Meridian:	Mount Diablo
Ground Surf Elev:	None	Horizontal Datum:	None
Planned Former Use:	Monitoring	Vertical Datum:	None
Top Perforated Int:	8	Decimal Latitude:	38.07976
Bottom Perf Intvl:	28	Decimal Longitude:	-121.3799
Own Assign Well No:	LR 2		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/New/Production or Monitoring/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	13436 THORTON RD		
Other Observations:	None		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
27	E	0.96	5,071.12	12.18	WATER WELLS

WCR No:	WCR2016-006635	Casing Diameter:	None
Legacy Log No:	None	Fluid:	None
APN:	055-130-13	Static Water Level:	18
Permit No:	SR0074506	Total Draw Down:	None
Permit Date:	3/28/2016	Elevation Accuracy:	None
Date Work Ended:	2016-04-06 00:00:00.000000000	Elev Determine Meth:	None
Workflow Status:	Completeness Review - Auto-Complete - 06-MAR-17	Well Yield:	None
Received Date:	2016-09-21 00:00:00.000000000	Well Yield Unit:	None
Drilling Method:	None	County Name:	San Joaquin
Total Drill Depth:	None	Township:	03N
Total Complete Depth:		Range:	05E
Test Type:	None	Section:	24
Pump Test Length:	None	LL Accuracy:	None
Mth of Determ LL:	None	Baseline Meridian:	Mount Diablo

Wells and Additional Sources Detail Report

Ground Surf Elev:	None	Horizontal Datum:	WGS84
Planned Former Use:	Water Supply Irrigation - Agriculture	Vertical Datum:	None
Top Perforated Int:	None	Decimal Latitude:	38.0876829
Bottom Perf Intvl:	None	Decimal Longitude:	-121.3712231
Own Assign Well No:	None		
Local Permit Agency:	San Joaquin County Environmental Health Department		
Record Type:	WellCompletion/Destruction/NA/NA		
City:	LODI		
Region Office:	DWR North Central Region Office		
Well Location:	12351 N THORTON RD		
Other Observations:	None		

Radon Information

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for *SAN JOAQUIN* County: **3**

Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L

Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L

Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Federal Area Radon Information for *SAN JOAQUIN* County

No Measures/Homes:	22
Geometric Mean:	1.3
Arithmetic Mean:	2.5
Median:	1.5
Standard Deviation:	3.8
Maximum:	18
% >4 pCi/L:	9
% >20 pCi/L:	0
Notes on Data Table:	TABLE 1. Screening indoor radon data from the EPA/State Residential Radon Survey of California conducted during 1989-90. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

Federal Sources

FEMA National Flood Hazard Layer

FEMA FLOOD

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

Indoor Radon Data

INDOOR RADON

Indoor radon measurements tracked by the Environmental Protection Agency(EPA) and the State Residential Radon Survey.

Public Water Systems Violations and Enforcement Data

PWSV

List of drinking water violations and enforcement actions from the Safe Drinking Water Information System (SDWIS) made available by the Drinking Water Protection Division of the US EPA's Office of Groundwater and Drinking Water. Enforcement sensitive actions are not included in the data released by the EPA. Address information provided in SDWIS may correspond either with the physical location of the water system, or with a contact address.

Radon Zone Level

RADON ZONE

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

Safe Drinking Water Information System (SDWIS)

SDWIS

The Safe Drinking Water Information System (SDWIS) contains information about public water systems as reported to US Environmental Protection Agency (EPA) by the states. Addresses may correspond with the location of the water system, or with a contact address.

Soil Survey Geographic database

SSURGO

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

U.S. Fish & Wildlife Service Wetland Data

US WETLAND

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

USGS Current Topo

US TOPO

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

USGS Geology

US GEOLOGY

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

USGS National Water Information System

FED USGS

The U.S. Geological Survey (USGS)'s National Water Information System (NWIS) is the nation's principal repository of water resources data. This database includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data.

State Sources

Oil and Gas Wells

OGW

A list of Oil and Gas well locations. This is provided by California's Department of Conservation Division of

Appendix

Oil, Gas and Geothermal Resources.

Periodic Groundwater Level Measurement Locations

Locations of groundwater level monitoring wells in the Department of Water Resources (DWR)'s Periodic Groundwater Levels dataset. The DWR Periodic Groundwater Levels dataset contains seasonal and long-term groundwater level measurements collected by the Department of Water Resources and cooperating agencies.

MONITOR WELLS

Well Completion Reports

List of wells from the Well Completion Reports data made available by the California Department of Water Resources' (DWR) Online System for Well Completion Reports (OSWCR). Please note that the majority of well completion reports have been spatially registered to the center of the 1x1 mile Public Land Survey System section that the well is located in.

WATER WELLS

Liability Notice

Reliance on information in Report: The Physical Setting Report (PSR) DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a review of environmental databases and physical characteristics for the site or adjacent properties.

License for use of information in Report: No page of this report can be used without this cover page, this notice and the project property identifier. The information in Report(s) may not be modified or re-sold.

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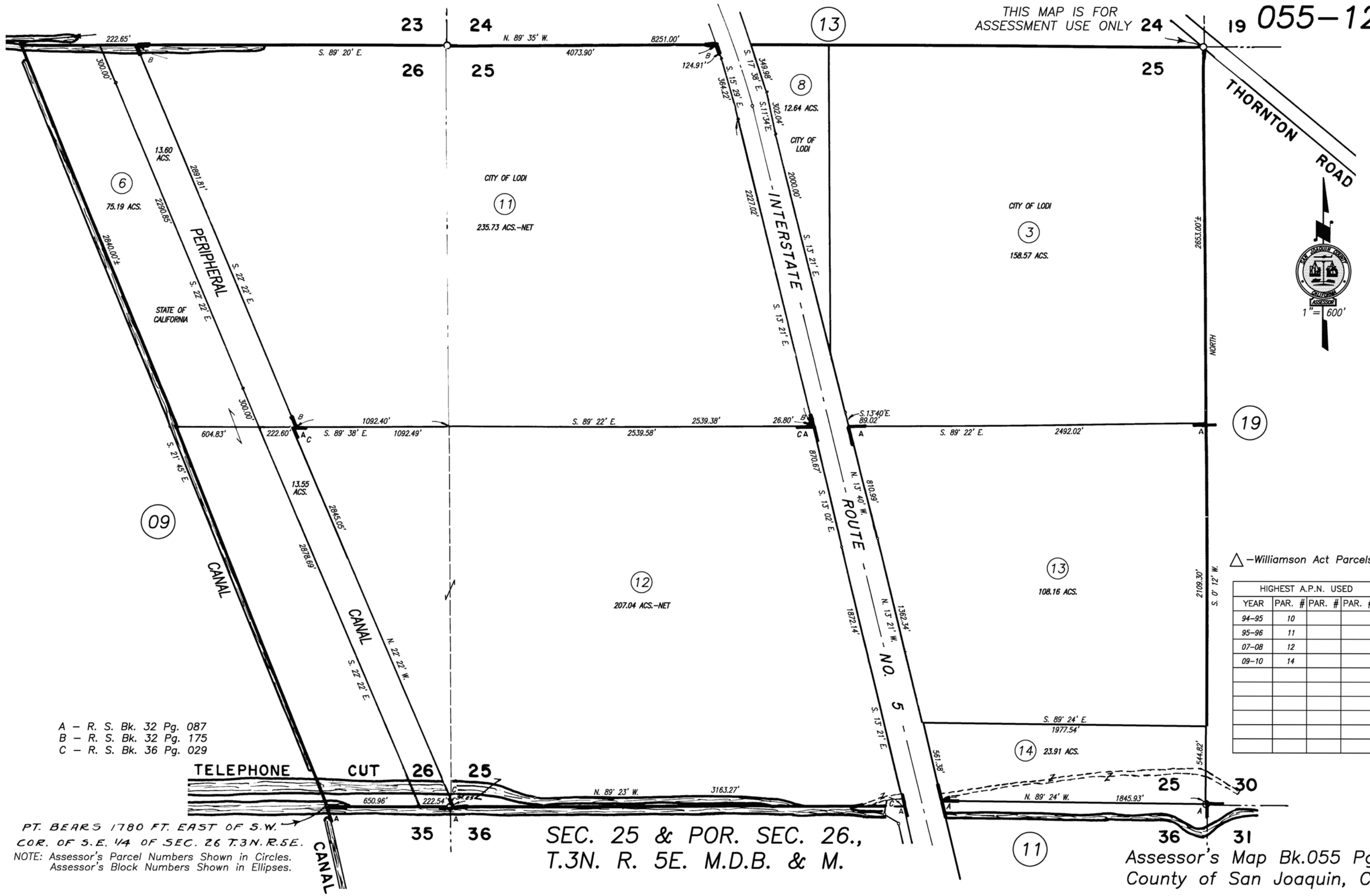
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APPENDIX B

Agency Records

THIS MAP IS FOR
ASSESSMENT USE ONLY

19 055-12



△ - Williamson Act Parcels

HIGHEST A.P.N. USED			
YEAR	PAR. #	PAR. #	PAR. #
94-95	10		
95-96	11		
07-08	12		
09-10	14		

A - R. S. Bk. 32 Pg. 087
B - R. S. Bk. 32 Pg. 175
C - R. S. Bk. 36 Pg. 029

PT. BEARS 1780 FT. EAST OF S.W.
COR. OF S.E. 1/4 OF SEC. 26 T.3N. R.5E.
NOTE: Assessor's Parcel Numbers Shown in Circles.
Assessor's Block Numbers Shown in Ellipses.

SEC. 25 & POR. SEC. 26.,
T.3N. R. 5E. M.D.B. & M.

Assessor's Map Bk.055 Pg
County of San Joaquin, Ca



Department of Toxic Substances Control



Linda S. Adams
Secretary for
Environmental Protection

Maziar Movassaghi
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Arnold Schwarzenegger
Governor

September 3, 2009

Mr. D. Stephen Schwabauer
City Attorney
City of Lodi
221 West Pine Street
Lodi, California 95241-1910

VOLUNTARY CLEANUP AGREEMENT, LODI ENERGY CENTER SITE, ASSESSOR'S
PARCEL NUMBER (APN) 055-139-16, LODI, CALIFORNIA

Dear Mr. Schwabauer:

The Department of Toxic Substances Control (DTSC) has enclosed a copy of the fully executed Voluntary Cleanup Agreement (VCA) for the proposed Lodi Energy Center Site (Site) located at 12745 North Thornton Road, Lodi, San Joaquin County, California.

In addition to this VCA, I have enclosed a Customer Service Survey developed by the California Environmental Protection Agency (Cal/EPA). Cal/EPA would appreciate your input regarding DTSC staff's performance while negotiating and preparing the agreement. Please complete the enclosed Customer Service Survey and return it to Cal/EPA. Your assistance in critiquing the quality and services provided by DTSC is greatly appreciated.

If you have any questions regarding the VCA document, please call Ms. Maria Gillette, Project Manager for this Site at (916) 255-3953.

Sincerely,

Steven R. Becker, P.G.
Supervising Senior Engineering Geologist
Brownfields and Environmental Restoration Program

Enclosures

cc: See next page.

Mr. D. Stephen Schwabauer
September 3, 2009
Page 2

cc: Mr. Gary D. Haeck, Ph.D., P.G.
Managing Senior Geologist
Stantec Consulting Corporation
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670

Ms. Leah S. Goldberg
Attorney at Law
Meyers Nave
555 12th Street, Suite 1500
Oakland, California 94607

Mr. Ed Warner
Northern California Power Agency
12751 North Thornton Road
Lodi, California 95242

Ms. Sarah Madams
CH2M Hill
2485 Natomas Park Drive, Suite 600
Sacramento, California 95833

Ms. Ellie Townsend-Hough
Chemical Engineer
California Energy Commission
1516 Ninth Street MS 40
Sacramento, California 95814

Ms. Maria Gillette
Project Manager
Northern California-Central Cleanup Operations Branch
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

IN THE MATTER OF:

Lodi Energy Center
12745 North Thornton Road
Lodi, California 95240

PROJECT PROPONENT:

City of Lodi
221 West Pine Street
Lodi, California 95241-6701

Docket No.: HSA-VCA 08/09-162

Voluntary Cleanup
Agreement

Health and Safety Code
Section 25355.5(a)(1)(C)

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) enters into this Voluntary Cleanup Agreement (Agreement) with the City of Lodi (the Proponent).

1.2 Site. The Lodi Energy Center property which is the subject of this Agreement (Site) is located at 12745 North Thornton Road, Lodi, San Joaquin County, California 95240. The Northern California Power Agency is proposing to construct a gas-fired generating station identified as the Lodi Energy Center (LEC) on the Site property and has submitted an Application of Certification to the California Energy Commission for approval of the proposed project. The Site property consists of an approximately 4.4 acre parcel that is located within the boundaries of the City of Lodi's existing White Slough Water Pollution Control Facility (WPCF) and described as a portion of the San Joaquin County Assessor's Parcel Number (APN) 055-139-16. A diagram of the Site and a location map are attached as Exhibit A and Exhibit B.

1.3 Jurisdiction. This Agreement is entered into by DTSC and Proponent pursuant to Health and Safety Code (H&SC) section 25355.5(a)(1)(C). This section authorizes DTSC to enter into an enforceable agreement with Proponent to oversee the characterization and cleanup of a Site.

1.4 Purpose. The purpose of this Agreement is for the Proponent to prepare a Preliminary Endangerment Assessment (PEA) (or other assessment deemed by DTSC to be substantially equivalent) to determine the extent of the Site property's existing hazardous substance contamination and conduct a removal action under the oversight

of DTSC. DTSC will be working cooperatively with the California Energy Commission to ensure timely coordination of document review and field activities. The purpose of this Agreement is also for DTSC to obtain reimbursement from the Proponent for DTSC's oversight costs.

II. BACKGROUND

2.1 Ownership. The Site property is owned by the City of Lodi, 221 West Pine Street, Lodi, California 95241-1910.

2.2 Substances Found at the Site. Information contained in the Agreement application, the Phase I Environmental Site Assessment (Phase I ESA), dated June 30, 2008, and the Phase II ESA, dated February 26, 2009, report the presence of elevated concentrations of metals, total petroleum hydrocarbons, polynuclear aromatic hydrocarbons and organochlorine pesticides in the Site's surface soils.

2.3 Physical Description. The Site is located in proximity to Interstate Highway 5, approximately 6 miles west of the Lodi city center and 2 miles north of the City of Stockton. The Site is bordered by the City of Lodi's White Slough Water Pollution Control Facility (WPCF) to the north and east, the San Joaquin County's Vector Control fish-rearing ponds on the south, and the Northern California Power Agency's (NCPA) turbine facility and switching yard on the west. Properties beyond the adjoining uses are developed with agricultural fields, and Interstate Highway 5 adjoins the WPCF on the east.

2.4 Site History. Historical aerial photos suggest that the subject property was used for agricultural purposes (row crops and pasture land) prior to the construction of the WPCF in the early 1960's. In recent years, the Site property has been used as a staging area for contractor construction improvements at the adjacent WPCF. Historical documentation indicates the Site property was also used in the late 1980's for the stockpiling of bio-solids/sludge removed from storage ponds at the adjacent WPCF. In 2003, the Site was reportedly used again for the temporary stockpiling of pond sediment during maintenance work at the WPCF. The Phase II ESA reported that these materials have been removed and that the Site property is currently vacant.

III. AGREEMENT

3.0 IT IS HEREBY AGREED THAT DTSC will provide review and oversight of the response activities conducted by the Proponent in accordance with the Scope of Work contained in Exhibit C. The Proponent shall conduct the activities in the manner specified herein and in accordance with the schedule specified in Exhibit E. All work shall be performed consistent with H&SC section 25300 et seq., as amended; the National Contingency Plan (40 Code of Federal Regulations (CFR) Part 300), as amended; U.S. EPA and DTSC Superfund guidance documents regarding site investigation and remediation.

3.1 Scope of Work and DTSC Oversight. DTSC shall review and provide Proponent with written comments on all Proponent deliverables as described in Exhibit C (Scope of Work) and other documents applicable to the scope of the project. DTSC shall provide oversight of field activities, including sampling, as appropriate. DTSC's completion of activities described above shall constitute DTSC's complete performance under this Agreement.

3.2 Additional Activities. Additional activities may be conducted and DTSC oversight provided by amendment to this Agreement or Exhibits hereto in accordance with Paragraph 3.17. If DTSC expects additional oversight costs to be incurred related to these additional activities, it will provide an estimate of the additional oversight cost to the Proponent.

3.3 Agreement Managers. Steven R. Becker, P.G., Supervising Senior Engineering Geologist is designated by DTSC as its Manager for this Agreement. D. Stephen Schwabauer, City Attorney for the City of Lodi, is designated by the Proponent as the Manager for this Agreement. Each Party to this Agreement shall provide at least ten (10) days advance written notice to the other of any change in its designated manager.

3.4 Notices and Submittals. All notices, documents and communications required to be given under this Agreement, unless otherwise specified herein, shall be sent to the respective parties at the following addresses:

3.4.1 To DTSC:

Steven R. Becker, P.G.
Supervising Senior Engineering Geologist
Brownfields and Environmental Restoration Program
Attn: Maria N. Gillette
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826

3.4.2 To the Proponent:

D. Stephen Schwabauer
City Attorney
City of Lodi
221 West Pine Street
Lodi, California 95241-1910

3.4.3 Charlie Swmley

Water Services Manager
City of Lodi
P.O. Box 3006
Lodi, California 95241

3.4.3 To the Proponent's Consultant:
Gary D. Haeck, Ph.D., P.G.
Stantec Consulting Corporation
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670-6150

3.4.4 To the Proponent's Tenant:
Ed Warner
Northern California Power Agency
12751 North Thornton Road
Lodi, California 95242

All plans and reports shall include a PDF copy in accordance with DTSC's Guidelines for Submitting PDF Documents contained in Exhibit F.

3.5 DTSC Review and Approval. If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Agreement fails to comply with this Agreement or fails to protect public health or safety or the environment, DTSC may (a) Return comments to the Proponent with recommended changes; or (b) Following consultation with the Proponent, modify the document as deemed necessary and approve the document as modified.

3.6 Communications. All DTSC approvals and decisions made regarding submittals and notifications will be communicated to the Proponent in writing by DTSC's Agreement Manager or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by the Proponent shall be construed to relieve the Proponent of the obligation to obtain such written approvals.

3.7 Endangerment During Implementation. In the event DTSC determines that any activity (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to the health and safety of people on the Site or in the surrounding area or to the environment, DTSC may order the Proponent to stop further implementation of this Agreement for such period of time as may be needed to abate the endangerment.

3.8 Payment. The Proponent agrees to pay (1) all costs incurred by DTSC in association with preparation of this Agreement and for review of documents submitted prior to the effective date of the Agreement, and (2) all costs incurred by DTSC in providing oversight pursuant to this Agreement, including review of the documents described in Exhibit C and associated documents, and in providing oversight of field activities. An estimate of DTSC's oversight costs is attached as Exhibit D.

It is understood by the parties that Exhibit D is an estimate and cannot be relied upon as the final cost figure. DTSC will bill the Proponent quarterly. Proponent agrees to make

payment within 60 days of receipt of DTSC's billing. Such billings will reflect any amounts that have been advanced to DTSC by the Proponent.

3.8.1 In anticipation of services to be rendered, the Proponent shall make an advance payment of \$20,000.00 to DTSC. That payment shall be made no later than ten (10) days after this Agreement is fully executed. If the Proponent's advance payment does not cover all costs payable to DTSC under this paragraph, Proponent agrees to pay the additional costs within sixty (60) days of receipt of a bill from DTSC.

3.8.2 If any bill is not paid by the Proponent within sixty (60) days after it is sent by DTSC, the Proponent may be deemed to be in material default of this Agreement.

3.8.3 All payments made by the Proponent pursuant to this Agreement shall be by a cashier's or certified check made payable to the "Department of Toxic Substances Control", and bearing on its face the project code for the Site (102011-11) and the docket number of this Agreement. Payments shall be sent to:

Department of Toxic Substances Control
Accounting/Cashier
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of the check shall be sent concurrently to DTSC's Agreement Manager/Performance Manager.

3.8.4 If the advance payment exceeds DTSC's actual oversight costs, DTSC will provide an accounting for expenses and refund the difference within 120 days after termination of this Agreement in accordance with Paragraph 3.18. In no other case shall the Proponent be entitled to a refund from DTSC or to assert a claim against DTSC for any amount paid or expended under this Agreement.

3.9 Condition Precedent. It is expressly understood and agreed that DTSC's receipt of the advance payment described in Paragraph 3.8.1. is a condition precedent to DTSC's obligation to provide oversight, review and/or comment on documents.

3.10 Record Retention. DTSC shall retain all cost records associated with the work performed under this Agreement for such time periods as may be required by applicable state law. The Proponent may request to inspect all documents which support DTSC's cost determination in accordance with the Public Records Act, Government Code section 6250 et seq.

3.11 Project Coordinator. The work performed pursuant to this Agreement shall be under the direction and supervision of a qualified project coordinator, with expertise in hazardous substance site cleanup. The Proponent shall submit: a) the name and address of the project coordinator; and b) in order to demonstrate expertise in

hazardous substance site cleanup, the resume of the coordinator. The Proponent shall promptly notify DTSC of any change in the identity of the Project Coordinator. All engineering and geological work shall be conducted in conformance with applicable state law, including but not limited to, Business and Professions Code sections 6735 and 7835.

3.12 Access. Proponent shall provide, and/or obtain access to the Site and offsite areas to which access is necessary to implement this Agreement. Such access shall be provided to DTSC's employees, contractors, and consultants at all reasonable times. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of any law. DTSC and its authorized representatives shall have the authority to enter and move freely about all property at the Site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to this Site; reviewing the progress of the Proponent in carrying out the terms of this Agreement; conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by the Proponent.

3.13 Sampling, Data and Document Availability. When requested by DTSC, the Proponent shall make available to DTSC, and shall provide copies of, all data and information concerning contamination at the Site, including technical records and contractual documents, sampling and monitoring information and photographs and maps, whether or not such data and information was developed pursuant to this Agreement.

3.14 Notification of Field Activities. The Proponent shall inform DTSC at least seven (7) days in advance of all field activities pursuant to this Agreement and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by the Proponent pursuant to this Agreement.

3.15 Notification of Environmental Condition. The Proponent shall notify DTSC's Agreement Manager immediately upon learning of any condition posing an immediate threat to public health or safety or the environment. Within seven (7) days of the onset of such a condition, the Proponent shall furnish a report to DTSC, signed by the Proponent's Agreement Manager, setting forth the events which occurred and the measures taken in the response thereto.

3.16 Preservation of Documentation. The Proponent shall maintain a central repository of the data, reports, and other documents prepared pursuant to this Agreement. All such data, reports and other documents shall be preserved by the Proponent for a minimum of six (6) years after the conclusion of all activities carried out under this Agreement. If DTSC requests that some or all of these documents be preserved for a longer period of time, the Proponent shall either comply with that request, deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. The Proponent shall notify DTSC in writing at least ninety (90) days prior to the expiration of the six-year minimum retention period before destroying any

documents prepared pursuant to this Agreement. If any litigation, claim, negotiation, audit or other action involving the records has been started before the expiration of the six year period, the related records shall be retained until the completion and resolution of all issues arising there from or until the end of the six-year period, which ever is later.

3.17 Amendments. This Agreement may be amended or modified solely upon written consent of all parties. Such amendments or modifications may be proposed by any party and shall be effective the third business day following the day the last party signing the amendment or modification sends its notification of signing to the other party. The parties may agree to a different effective date.

3.18 Termination for Convenience. Except as otherwise provided in this Paragraph, each party to this Agreement reserves the right unilaterally to terminate this Agreement for any reason. Termination may be accomplished by giving a thirty (30) day advance written notice of the election to terminate this Agreement to the other Party. In the event that this Agreement is terminated under this Paragraph, the Proponent shall be responsible for DTSC costs through the effective date of termination.

3.19 Exhibits. All exhibits attached to this Agreement are incorporated herein by this reference.

3.20 Time Periods. Unless otherwise specified, time periods begin from the date this Agreement is fully executed, and "days" means calendar days. "Business days" means all calendar days that are not weekends or official State holidays.

3.21 Proponent Liabilities. Nothing in this Agreement shall constitute or be considered a satisfaction or release from liability for any condition or claim arising as a result of Proponent's past, current, or future operations. Nothing in this Agreement is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the Site.

3.22 Government Liabilities. The State of California (State) shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by the Proponent or by related parties in carrying out activities pursuant to this Agreement, nor shall the State of California be held as a party to any contract entered into by the Proponent or its agents in carrying out the activities pursuant to this Agreement.

3.23 Third Party Actions. In the event that the Proponent is a party to any suit or claim for damages or contribution relating to the Site to which DTSC is not a party, the Proponent shall notify DTSC in writing within ten (10) days after service of the complaint in the third-party action. Proponent shall pay all costs incurred by DTSC relating to such third-party actions, including but not limited to, responding to subpoenas.

3.24 Reservation of Rights. DTSC and the Proponent reserve the following rights.

3.24.1 DTSC reserves its right to pursue cost recovery under the Comprehensive Environmental Response, Compensation and Liability act of 1980 (CERCLA), as amended, the California Health and Safety Code section 25360, and any other applicable section of the law.

3.24.2 Nothing in this Agreement is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law or equity to protect public health and safety or the environment and recovering the costs thereof.

3.24.3 Nothing in this Agreement shall constitute or be construed as a waiver of the Proponent's rights, (including any covenant not to sue or release) with respect to any claim, cause of action, or demand in law or equity that the Proponent may have against any "person", as defined in Section 101(21) of CERCLA, or Health and Safety Code section 25319, that is not a signatory to this Agreement.

3.24.4 By entering into this Agreement, Proponent does not admit to any fact, fault or liability under any statute or regulation.

3.25 Compliance with Applicable Laws. Nothing in this Agreement shall relieve the Proponent from complying with all applicable laws and regulations, and the Proponent shall conform all actions required by this Agreement with all applicable federal, state and local laws and regulations.

3.26 California Law. This Agreement shall be governed, performed and interpreted under the laws of the State of California.

3.27 Severability. If any portion of this Agreement is ultimately determined not to be enforceable, that portion will be severed from the Agreement and the severability shall not affect the enforceability of the remaining terms of the Agreement.

3.28 Parties Bound. This Agreement applies to and is binding, jointly and severally, upon each signatory and its officers, directors, agents, receivers, trustees, heirs, executors, administrators, successors, and assigns, and upon any successor agency of the State of California that may have responsibility for and jurisdiction over the subject matter of this Agreement. No change in the ownership or corporate or business status of any signatory, or of the facility or Site shall alter any signatory's responsibilities under this Agreement.

3.29 Effective Date. The effective date of this Agreement is the date when this Agreement is fully executed.

3.30 Representative Authority. Each undersigned representative of the parties to this Agreement certifies that she or he is fully authorized to enter into the terms and

conditions of this Agreement and to execute and legally bind the parties to this Agreement.

3.31 Counterparts. This Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.



Date

9/3/09

Steven R. Becker, P.G.
Supervising Senior Engineering Geologist
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control

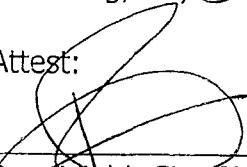


Blair King, City Manager

Dated:

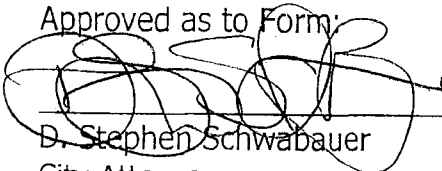
8/21/09

Attest:



Randi Juhl, City Clerk

Approved as to Form:



D. Stephen Schwabauer
City Attorney
City of Lodi

EXHIBITS
LODI ENERGY CENTER

A - SITE DIAGRAM

B - SITE LOCATION MAP

C - SCOPE OF WORK

D - COST ESTIMATE

E - SCHEDULE

F - SUBMITTING PDF DOCUMENTS

EXHIBIT A
SITE DIAGRAM
LODI ENERGY CENTER

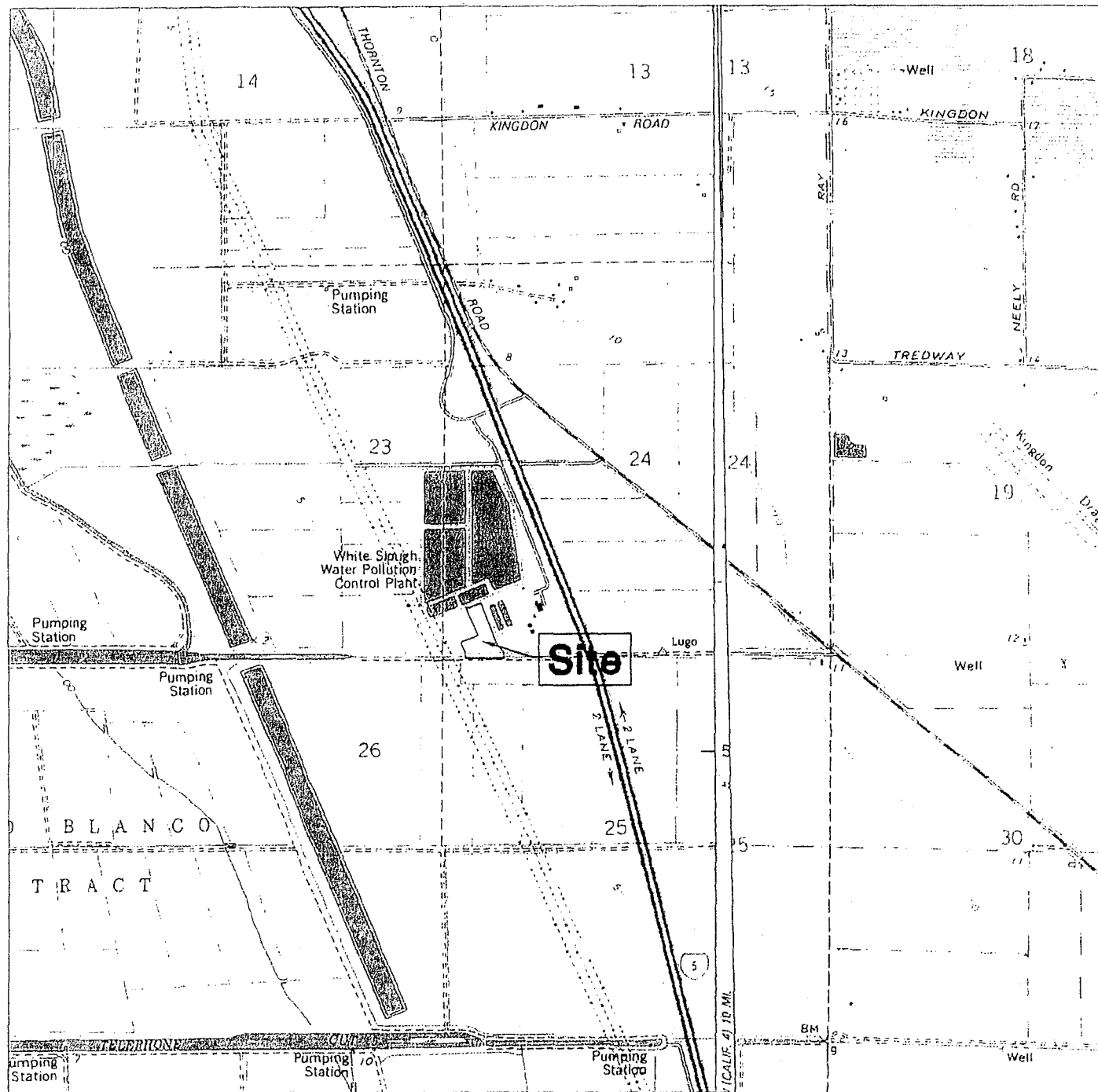


This map was prepared from various source data and maps and is intended to provide an approximate representation of actual locations.

THE INFORMATION ON THIS MAP IS PROVIDED FOR YOUR INFORMATION ONLY. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.

CH2MHILL

EXHIBIT B
SITE LOCATION MAP
LODI ENERGY CENTER



Terminous and Lodi South, CA U.S.G.S Topographic
 Quadrangles
 T3N, R5E, Sec. 23
 1:24,000

Project 6300-01-08

June 2008

Environmental Site Assessment
 12751 North Thornton Road, Lodi
 San Joaquin, California

FIGURE

1



Carlton Engineering, Inc.
 3883 Ponderosa Road
 Shingle Springs, California 95682

EXHIBIT C
SCOPE OF WORK
LODI ENERGY CENTER

The following Tasks will be completed as part of this Agreement:

TASK 1. Preliminary Endangerment Assessment (PEA). The Proponent shall conduct a PEA to determine whether a release or threatened release of hazardous substances exists at the Site which poses a threat to human health of the environment. The PEA shall be conducted in accordance with the DTSC guidance manual for evaluating hazardous substance release sites, titled: "Preliminary Endangerment Assessment Guidance Manual", State of California, Environmental Protection Agency, Department of Toxic Substances Control (January 1994). Documents which may be required as part of the PEA are:

- (a) PEA Workplan. This workplan shall include a sampling plan designed to determine the type and general extent of contamination at the Site; a health and safety plan addressing health and safety issues and safe work practices; and a quality assurance/quality control (QA/QC) plan to produce data of known quality.
- (b) PEA Report. This report will document whether a release has occurred or threatened release exists, the threat the Site poses to human health and the environment, and whether further action is necessary.

TASK 2. Removal Action Workplan (RAW). In the event DTSC determines that a removal action is appropriate, the Proponent will prepare a RAW in accordance with Health and Safety Code sections 25323.1 and 25356.1. The Draft RAW shall address the following criteria:

- (a) a description of the onsite contamination;
- (b) the goals to be achieved by the removal action;
- (c) an analysis of the alternative options considered and rejected, and the basis for that rejection. This analysis should include a discussion for each alternative which covers its effectiveness, implementability and cost;
- (d) administrative record list; and
- (e) a statement that the RAW serves as an equivalent document to the Engineering Evaluation/Cost Analysis document required by the National Contingency Plan
- (f) Remedial Design and Implementation Plan consisting of:
 - 1. technical and operational plans and engineering designs for implementation of the approved remedial or removal action alternative(s);
 - 2. a schedule for implementing the construction phase;
 - 3. a description of the construction equipment to be employed;
 - 4. a Site specific hazardous waste transportation plan (if necessary);

5. a Site specific hazardous waste transportation plan (if necessary);
6. the identity of any contractors, transporters and other persons conducting the removal and remedial activities for the Site;
7. post-remedial sampling and monitoring procedures (as applicable) for air, soil, surface water and groundwater;
8. operation and maintenance procedures and schedules; and
9. a health and safety plan.

TASK 3. California Environmental Quality Act (CEQA). Based on the results of the proposed project's initial environmental assessment, DTSC will prepare the necessary CEQA documents. If required, the Proponent will submit the information necessary for DTSC to prepare these documents.

TASK 4. Implementation of Final RAW. Upon DTSC's approval of the final RAW, the Proponent shall implement the removal action, as approved. Within, thirty (30) days of completion of field activities, the Proponent shall submit an Implementation Report documenting the implementation of the final RAW.

TASK 5. Changes During Implementation of Final RAW. During implementation of the final RAW and Remedial Design and Implementation Plan (RDIP), DTSC may specify such additions, modifications and revisions to the RAW or RDIP as deemed necessary to protect human health and safety, or the environment to implement the RAW.

TASK 6. Public Participation.

6.1 Proponent shall conduct appropriate public participation activities given the nature of the community surrounding the Site and the level of community interest. Proponent shall work cooperatively with DTSC to ensure that the affected and interested public and community are involved in DTSC's decision-making process. Any such public participation activities shall be conducted in accordance with Health and Safety Code sections 25358.7, the DTSC Public Participation Policy and Procedures Manual, and with DTSC's review and approval.

6.2 The Proponent shall prepare a community profile to examine the level of the community's knowledge of the Site; the types of community concerns; the proximity of the Site to homes and/or schools, day care facilities, churches, etc.; the current and proposed use of the Site; media interest; and involvement of community groups and elected officials.

6.3 The Proponent shall develop and submit fact sheets to DTSC for review and approval when specifically requested by DTSC. Proponent shall be responsible for printing and distribution of fact sheets upon DTSC approval using the approved community mailing list.

6.4 The Proponent shall publish, in a major local newspaper(s), a public notice announcing the availability of the RAW for public review and comment. The public comment period shall last a minimum of thirty (30) days.

6.5 DTSC may require that the Proponent hold at least one public meeting to inform the interested community of the proposed activities and to receive public comments on the RAW.

6.6 Within two weeks of the close of the public comment period, the Proponent shall coordinate with DTSC the preparation of written response to the public comments received.

6.7 If appropriate, the Proponent will revise the RAW on the basis of comments received from the public, and submit the revised RAW to DTSC for review and approval. The Proponent will also notify the public of any significant changes from the actions proposed in the RAW.

TASK 7. Quality Assurance/Quality Control (QA/QC) Plan. All sampling and analysis conducted by the Proponent under this Agreement shall be performed in accordance with a QA/QC Plan submitted by the Proponent and approved by DTSC. The QA/QC Plan will describe:

- (a) the procedures for the collection, identification, preservation and transport of samples;
- (b) the calibration and maintenance of instruments;
- (c) the processing, verification, storage and reporting of data, including chain of custody procedures and identification of qualified person(s) conducting the sampling and of a laboratory certified or approved by DTSC pursuant to Health and Safety Code section 25198; and
- (d) how the data obtained pursuant to this Agreement will be managed and preserved in accordance with the Preservation of Documentation section of this Agreement.

TASK 8. Health and Safety Plan. The Proponent will submit a Site Health and Safety Plan in accordance with California Code of Regulations, Title 8, section 5192 and DTSC guidance, which covers all measures, including contingency plans, which will be taken during field activities to protect the health and safety of the workers at the Site and the general public from exposure to hazardous waste, substances or materials. The Health and Safety Plan should describe the specific personnel, procedures and equipment to be utilized.

TASK 9. Deed Restrictions. The Parties agree that deed restrictions or land use restrictions may be necessary to insure full protection of the environment and human health. DTSC may require such a deed restriction or land use restriction as part of the RAW approval. The Proponent agrees to sign and record the deed or land use restrictions approved by DTSC.

TASK 10. Operation and Maintenance (O&M) Agreement. The Proponent shall comply with all operation and maintenance requirements in accordance with the final RAW. The Proponent shall enter into an O&M Agreement (which includes financial assurance requirements) with DTSC prior to certification of the Site.

EXHIBIT E
ESTIMATED SCHEDULE
LODI ENERGY CENTER

TASK	SCHEDULE
Scoping Meeting between DTSC and Proponent	Early August 2009
Proponent submits PEA Workplan	August 14, 2009
DTSC Provides Comments on PEA Workplan	Within 21-days of receipt of PEA Workplan (outside date September 4, 2009)
Proponent submits Draft PEA Document	October 16, 2009 (within 42 days from comments)
DTSC Provides Comments or Approval on Draft PEA Document)	Within 21-days of receipt of PEA Document (November 6, 2009)
Proponent submits Draft RAW Document	November 20, 2009 (within 14 days of comments)
DTSC provides Comments or Approval of the Draft RAW	Within 21 days after receipt (December 11, 2009)
Proponent Submits Final Draft RAW (if necessary) to address DTSC's Comments	Within 7 days after receiving DTSC's comments (December 18, 2009)
DTSC approves Final Draft RAW, advertises and holds 30-day public comment period for Draft RAW and CEQA documentation	During 45 days after receipt of Final Draft RAW
DTSC responds to public comments (if any) and approves the Final RAW	Within 14 days of close of public comment period
Proponent submits RAW Implementation/Completion Report	Within 30 days of completing field work
DTSC reviews/approves RAW Implementation/Completion Report	Within 21 days of receiving Implementation Report

Proponent reviews Draft Land Use
Covenant and Operation &
Maintenance (O&M) Agreement

Within 30 days of receiving Draft Land
Use Covenant and O&M Agreement

DTSC certifies Site

Following DTSC approval of the RAW
Implementation Report, recording of
the Land Use Covenant, signature of
the O&M Agreement and preparation
of the O&M Plan (as required)

EXHIBIT F
SUBMITTING PDF DOCUMENTS
LODI ENERGY CENTER

With the introduction of the Site Mitigation and Brownfields Reuse Program's (SMBRP's) database, EnviroStor, the public can now download and view project related documents online. To provide the public with this vital source of information, please provide a PDF copy of reports, even if a hard copy will be supplied.

Due to differences in internet downloading capabilities and resolutions of PDF files, many users have trouble downloading and viewing large PDF files. The following guidelines were created to provide consistency in PDF files and allow most users to access these files.

- 1) **File size:** For each file that needs to be uploaded, the maximum file size should be kept to **15 megabytes** (MB). If you have a large file, please save large color images (e.g., figures, site photos, maps) and supplemental information (appendices) in separate PDF files. If using a scanner, the scanner resolution should be no more than 200 dpi.
- 2) **Saving and Naming PDF files:** If you make any changes to a PDF file, always use the Save As option instead of the Save option when saving. This will produce a smaller file size. It is recommended that the files be named by using an abbreviated site name, report title, date, and, if multiple files are being uploaded, the section of report (e.g., **Site_report_section_mmddyy**, 968-81stAve_PEA_text_072706, etc).
- 3) **Bookmarks:** For large reports, bookmarks should be created in the PDF for ease of navigation. For help on creating bookmarks, please refer to Adobe Acrobat Help.
- 4) **FTP server:** To submit large files or a group of files that cannot be sent via e-mail, they can be sent to a DTSC staff member via the FTP server. Below are the instructions to submit files via the FTP server:

Link: http://www.dtsc.ca.gov/database/DTSC_FTP_Requests/index.cfm

i. **Provide Upload File Information** Please provide information about yourself, the recipient, and the name of the computer file to be uploaded. This tells our system:

- a. to expect and allow your file onto the FTP server,
- b. to whom the recipient is, and
- c. to let the recipient know who sent the file

ii. **Transfer the File:** Once your information is provided in the first step, you have 60 minutes to send your file to our server. You will be provided with an FTP location after providing the information. You will be notified upon the successful receipt or failure to receive your file.

For further assistance about submitting PDF files, please contact the appropriate Brownfields and Environmental Restoration Program Project Manager, or the EnviroStor Help Desk at (916) 323-3400, or by email to EnviroStor@dtsc.ca.gov.



Stantec

Stantec Consulting Corporation
3017 Kilgore Road Suite 100
Rancho Cordova CA 95670
Tel: (916) 861-0400
Fax: (916) 861-0430

November 2, 2009

File: 185702098

Mr. D. Stephen Schwabauer
Lodi City Attorney
City of Lodi
221 West Pine St
Lodi, California 95240

Reference: Preliminary Endangerment Assessment
Proposed Lodi Energy Center Site
12745 N. Thornton Road
Lodi, California 95240

Dear Mr. Schwabauer:

Stantec Consulting Corporation (Stantec) is pleased to submit this Preliminary Endangerment Assessment report for the above referenced site. This copy is sent to you as the project proponent to forward under the City's cover letter to the California Environmental Protection Agency, Department of Toxic Substances Control. If you have any questions, please do not hesitate to contact me.

Sincerely,

STANTEC CONSULTING CORPORATION

Gary D. Haeck, Ph.D., P.G.
Managing Senior Geologist
Tel: (916) 861-0400
Fax: (916) 861-0430

Attachment: Preliminary Endangerment Assessment

c. Maria Gillette, DTSC
Leah Goldberg, Meyers Nave
Ed Warner, NCPA
Sarah Madams, CH2MHill



Stantec

Stantec Consulting Corporation
3017 Kilgore Road Suite 100
Rancho Cordova CA 95670
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Fax: (916) 861-0430

November 2, 2009
File: 185702098.200.0004

Ms. Maria Gillette, Project Manager
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control
Sacramento Field Office
8800 Cal Center Drive
Sacramento, California, 95826-3200

Dear Ms. Gillette:

**Reference: Preliminary Endangerment Assessment
Proposed Lodi Energy Center Site
12745 N. Thornton Road
San Joaquin County APN 055-139-16
Lodi, California 95240**

On behalf of the City of Lodi (City), Stantec Consulting Corporation (Stantec) presents this modified *Preliminary Endangerment Assessment* (PEA) for the proposed Lodi Energy Center (LEC) (Site) (Figures 1 and 2) referenced above. This PEA was completed in accordance with Stantec's August 13, 2009 *Preliminary Endangerment Assessment Workplan* (Workplan) and the California Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment Guidance Manual* (DTSC Guidance) (DTSC, 1994/1999), with the exceptions noted below. Stantec's PEA Workplan was approved by DTSC in August 31, 2009 email correspondence and formally approved in DTSC's September 3, 2009 letter entitled *Approval of Final Workplan for the Preliminary Endangerment Assessment of the Proposed Lodi Energy Center Site, 12745 N. Thornton Road, Lodi, San Joaquin County, California*.

BACKGROUND

The Northern California Power Agency (NCPA) is proposing to construct on City of Lodi property a natural gas-fired electrical power generation facility (LEC) on a 4.4 acre portion (Site) of San Joaquin County APN 055-139-16 in Lodi, California. NCPA contracted Carlton Engineering Inc. (Carlton) to perform a Phase I Environmental Site Assessment (ESA) at the Site. The June 30, 2008 ESA identified several potential environmental concerns (PECs). Based on the ESA results, the California Energy Commission (CEC) (lead agency for licensing thermal power plants 50 megawatts and larger under the California Environmental Quality Act) requested that NCPA conduct field sampling and soil analyses to adequately characterize the presence of harmful chemicals at the Site and discuss potential risks from these chemicals. In compliance, NCPA directed CH2M HILL to perform a limited Phase II Environmental Site Assessment (Phase II ESA) to comply with the CEC request.

On February 2, 2009, CH2M HILL performed preliminary soil sampling and analyses to provide data regarding the PECs identified in the Carlton ESA. CH2M HILL summarized the data in the

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February 26, 2009 Memorandum entitled *NCPA Lodi Preliminary Phase II ESA Sample Results* and compared it to various agency soil-screening levels to evaluate risk to human health. CH2M HILL concluded that exposure of construction workers and onsite industrial workers to surface and subsurface soils may adversely affect human health. Based on these results, the CEC requested that additional investigation and evaluation of risk (PEA) be conducted under DTSC oversight.

The City completed a Voluntary Cleanup Agreement with DTSC for the project (executed on September 3, 2009) and contracted with Stantec to perform the required PEA. DTSC approved Stantec's PEA Workplan on August 31, 2009 and Stantec completed the field investigation portion of the PEA on September 1 and 2, 2009. During report preparation and review of the February 2, 2009 soil analyses, it became apparent that the polycyclic aromatic hydrocarbon (PAH) and organochlorine pesticide data (reported as micrograms per kilogram (ug/kg)) had been inadvertently tabulated with units of milligrams per kilogram (mg/kg). This unit's error resulted in a one-thousand fold increase in concentrations from their actual values. When these inflated concentration data had been compared to and exceeded several of the various risk-based screening levels it created a false impression that significant risk to human health was present primarily from PAH soil impacts.

About this time, Stantec's preliminary PEA analytical results were received and they confirmed that no risk to human health and safety is present at the Site. Stantec informed the City of the error and a conference call with DTSC was conducted to discuss the situation. The conference call was held on September 30, 2009 and participants included representatives of the City, Stantec, DTSC, NCPA, and CH2M HILL. DTSC indicated that based on this information, a No Further Action Required (NFAR) letter was appropriate. It was agreed that CH2M HILL would send a letter acknowledging the units error to the City for forwarding along with the Stantec PEA analytical results to DTSC. DTSC agreed that it would issue a NFAR letter for the LEC project upon receipt of this information from the City. This modified PEA briefly presents the results of the investigation and because the soil data do not exceed risk based screening levels, a formal evaluation of risk as outlined in Sections 7.0 and 8.0 of the Workplan is not presented.

PRE-FIELD INVESTIGATION EFFORTS

Stantec marked the proposed boring locations with white paint and contacted Underground Service Alert (USA) at least 48-hours prior to drilling. Stantec also contracted a private utility locating service and cleared the area prior to drilling.

Soil boring permits were obtained from San Joaquin County Environmental Health Department (SJCEHD) prior to the commencement of drilling activities. A copy is included as Attachment 1.

FIELD INVESTIGATION

The investigation was completed on September 1 and 2, 2009 in accordance with procedures outlined in the approved Workplan (and the included Site Safety Plan [SSP], Sampling and Analysis Plan [SAP] and Quality Assurance Project Plan [QAPP]). Stantec contracted Gregg Drilling and

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Testing, a C-57 licensed drilling contractor from Martinez, California to mobilize a direct-push rig. However, because part of the Site was considered Giant Garter Snake habitat, Stantec complied with a request from the San Joaquin Council of Governments to not utilize rig equipment to advance any borings within 200 feet of the southern canal (Figure 2). A total of 24 borings (B-8 through B-27), including four borings (BG-4 through BG-7) to collect background samples, were advanced by hand auger techniques to a maximum depth of approximately 6.5 feet below ground surface (bgs). In situ soil samples were collected with a slide hammer sampler at two, four, and six feet bgs in all borings with procedures specified in the SAP. Per DTSC request, four additional samples were collected from depths of 0.5 feet bgs. All soil samples were field screened for volatiles with a Photoionization Detector (PID); PID readings were non-detect for all samples. Groundwater was not encountered in any borings and they were properly backfilled under the supervision of SJCEHD each day.

One groundwater sample was also collected from an existing on-site groundwater monitoring well WSM-3.

ANALYTICAL PROGRAM

The approved analytical program initially consisted of a two-phase approach where analysis of the four-foot samples was to be contingent on the results of the two- and six-foot samples. Because of the discovery of the unit's error on the February 2, 2009 analyses, the only four-foot samples analyzed were those collected from the background borings, which were analyzed for selected analytes.

A total of 55 samples were analyzed in the first round including the following:

- Two- and six-foot samples from the 20 characterization borings (40 samples),
- Two- and six-foot samples from the four background borings (8 samples),
- Four 0.5-foot samples from selected characterization borings (4 samples), and
- Three duplicate samples (5 percent required duplicates).

The above samples were analyzed for the following:

- Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C (GC/MS-SIM),
- Organochlorine Pesticides (OCPs) by EPA Method 8081A,
- CAM 17 metals by EPA Methods 6020B and 7471A,
- Total Petroleum Hydrocarbons (TPH) quantified as gasoline, diesel, and motor oil by EPA Method 8260B or 8015M (as appropriate),
- Volatile Organic Compounds (VOCs) by EPA Methods 5035 and 8260B – DTSC requested a spatially representative subset of four two-foot bgs soil samples from the 20 proposed soil boring locations (B-8, B-13, B-18, and B-22).

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The one groundwater sample collected from onsite well WSM-3 was analyzed for PAHs, OCPs, and CAM 17 metals in accordance with the above methods.

The analytical results are compiled in Tables 1 through 5. Copies of the laboratory analytical reports and chain of custody documentation are included as Attachment 2.

DATA VALIDATION, QUALITY ASSURANCE PROGRAM

Because of the project's evolution, formal completion of a data validation process was not performed.

The analytical laboratory prepared its data package utilizing Level-III quality assurance/quality control (QA/QC) methods. No data were deemed non-representative after completing all required QA/QC processes. The associated laboratory documentation (nearly 1,000 pages) is included on CD in Attachment 3.

INVESTIGATION-DERIVED WASTES

Investigation-derived wastes, monitoring well purge water, and decontamination water were collected in properly-labeled Department of Transportation (DOT)-approved 55-gallon drums and temporarily stored onsite. The drums were removed on October 5, 2009 by Belshire Environmental Services, a state-licensed and certified waste hauler, and transported as non-hazardous waste according to applicable federal, state, and local regulations. The drum of soil cuttings went to TPST Soil Recyclers of California in Adelanto, California and the drum of purge water went to the Demenno Kerdoon facility in Compton, California. Copies of the manifests are included in Attachment 4.

ANALYTICAL RESULTS

Because of the project's evolution, a formal evaluation of risk to human health in accordance with *DTSC Guidance* and Section 7.0 of the Workplan was not completed. A brief discussion of the results and comparison with risk-based screening criteria is presented. The Workplan proposed to compare soil analytical data to the following risk-based screening criteria using a hierarchical approach in the order listed below:

- California Human Health Screening Levels (CHHSLs) for commercial/industrial land use;
- USEPA Regional Screening Levels (RSLs) for industrial soil; and
- Where a CHHSL or RSL screening value does not exist, detected concentrations will be compared to San Francisco Regional Water Quality Control Board Environmental Screening Levels (ESLs) Shallow Soil Screening Levels (less than 3 meters bgs), Commercial/Industrial land use where groundwater is not a current or potential drinking water source.

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The approved Workplan indicated that detected concentrations of PAHs, OCPs, and metals in the water sample would be compared to California maximum contaminant levels (MCLs), where established.

The analytical results for the soil and groundwater samples are included in Tables 1 through 5. At the top of each table, the appropriate screening levels are shown in the same units as the analytical results, whether the level is based on carcinogenic or non-carcinogenic risk, and a reference to the relevant promulgating agency.

As discussed above, the February 2, 2009 PAH data were the first-order risk driver for the project, with several analytes reportedly exceeding screening criteria. Minor exceedances of screening criteria for a few OCP analytes occurred in some samples, although most of these were based on J-flagged values (i.e., below method reporting limits) or their relative percent differences from duplicate samples were greater than 40 percent. Also as typically is the case in California, arsenic also exceeded screening criteria in all samples, including background samples. The inadvertent tabulation of ug/kg PAH and OCP data with units of mg/kg resulted in apparent exceedances of these screening criteria. Included in Attachment 4 is a letter from CH2M HILL acknowledging this error and presenting a revised Table 1 showing that the PAH and OCP data do not exceed the screening criteria.

In CH2M HILL's original and revised Table 1, the reported exceedance of the hexavalent chromium screening criteria (37 mg/kg) by the February 2, 2009 total chromium concentrations is overly conservative and somewhat misleading. Total chromium includes both trivalent and hexavalent chromium. The normal ratio of these isotopes is 6:1, respectively. The USEPA soil screening levels include an RSL for total chromium, which is 1,400 mg/kg (Table ?). None of detected concentrations of total chromium exceed this RSL, therefore no risk is present from total chromium. Thus with the corrected units for PAHs and OCPs and the appropriate RSL for chromium, none of PAHs, OCPs, or metals exceed the screening levels except for arsenic, which is discussed below.

Arsenic detected in February 2, 2009 characterization samples ranged from 2.35 to 6.91 mg/kg while background samples ranged from 3.85 to 3.94 mg/kg. Arsenic in the PEA samples ranged from 1.7 to 11 mg/kg while PEA background samples ranged from 2.8 to 7.7 mg/kg. As documented in several published studies, arsenic soil concentrations in California very commonly exceed risk-based screening levels. All arsenic soil concentrations detected in both the February 2, 2009 Phase II and in the PEA samples (and background samples) exceed screening levels. This is because of the common occurrence of arsenic bearing rocks in both the Sierra Nevada and Coastal Range mountains and other source terranes throughout California. For example, the various carcinogenic risk-based screening levels for arsenic in industrial soils range from 0.24 mg/kg (CHHSL) to 1.6 mg/kg (RSL), while naturally-occurring concentrations of arsenic in soil typically exceed this concentration throughout the Bay Area (RWQCB-SFR, 2007). Data presented in a report entitled *Background Concentrations of Trace and Major Elements in California Soils* (Bradford et. al, 1996) indicate that arsenic concentrations in California range from 0.59 to 11 mg/kg with a mean of 3.54 mg/kg (RWQCB-SFR, 2007). An additional study entitled *Element*

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Concentrations in Soils and Other Surficial Materials of the Conterminous United States also collected samples in the San Francisco Bay region (Shacklette and Boerngen, 1984) for which arsenic concentrations ranged from 16 to 97 mg/kg. Cal EPA does not generally require cleanup of naturally-occurring chemicals to less than background. Therefore, the arsenic soil concentrations are similar to background concentrations and do not warrant any mitigation.

The PEA analytical results (Table 1 through 5) confirm the conclusion based on the revised CH2M HILL February 2, 2009 investigation data set that there is no evidence of risk to human health present at the Site. As shown in Table 1 through 5, none of the detected concentrations of PAHs (Table 1), OCPs (Table 2), metals (except arsenic) (Table 3), and TPH (Table 4) in any of the samples exceeded their respective screening levels. The four samples analyzed for VOCs (Table 5) did not contain any analytes detected above method reporting limits.

The groundwater sample collected from onsite monitoring well WSM-3 did not contain any detectable concentrations of PAHs or OCPs. Metals in this sample were either not detected above method reporting limits or detected concentrations were below California MCLs, where established.

CONCLUSIONS AND RECOMMENDATIONS

A PEA was conducted at the proposed LEC site at the request of the CEC, based on the results of a Phase I ESA and a February 2, 2009 Phase II ESA conducted for NCPA. Following completion of the field investigation phase of the PEA, it was discovered that the February 2, 2009 PAH and OCP part per billion data had been inadvertently presented in units of parts per million, thereby increasing actual concentrations by a factor of one thousand. This error resulted in what appeared to be significant risk to human health, where in fact, none was present. The PEA characterized the LEC site with 20 borings and 44 soil samples analyzed for PAHs, OCPs, metals, TPH, and VOCs confirming that the soils do not pose a risk to human health and safety. Stantec concludes that no additional characterization is warranted, and no remediation is necessary to safely complete the construction of the proposed LEC facility.

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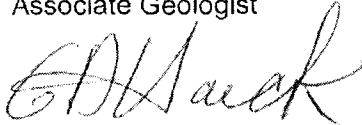
Should you have any questions or concerns regarding this report, please feel free to contact me.

Sincerely,

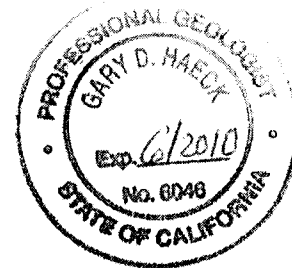
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Fax: (916) 861-0430
Gary.Haeck@Stantec.com



Enclosures: Figures

Figure 1	Site Location Map
Figure 2	Site Plan

Tables

Table 1	Polycyclic Aromatic Hydrocarbons
Table 2	Organochlorine Pesticides
Table 3	Metals
Table 4	Total Petroleum Hydrocarbons
Table 5	Volatile Organic Compounds

Attachments

Attachment 1	Soil Boring Permit
Attachment 2	Laboratory Analytical Reports, Chain Of Custody Documentation, and Laboratory Level III QA/QC Documentation
Attachment 3	Non-Hazardous Waste Manifests
Attachment 4	CH2M HILL October 6, 2009 Letter to DTSC, and Revised Table 1, Summary of Soil Analytical Results

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REFERENCES CITED

Bradford et. al, 1996. *Background Concentrations of Trace and Major Elements in California Soils*, Kearney Foundation special Report, UC-Riverside and CAL_EPA DTSC, March 1996.

CH2M HILL, 2009. Memorandum entitled *NCPA Lodi Preliminary Phase II ESA Sample Results*, February 26, 2009.

DTSC, 1994. *Preliminary Endangerment Assessment Guidance Manual*, State of California, Environmental Protection Agency, Department of Toxic Substances Control, January 1994.

RWQCB-SFR, 2007/2008. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Regional Water Quality Control Board, San Francisco Bay Area Region, November 2007, updated May 2008.

Shacklette, H.T. and J. T. Boerngen, 1984. *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*, USGS Professional Paper 1270,

Stantec, 2009. *Preliminary Endangerment Assessment Workplan, Proposed Lodi Energy Center Site, 12745 N. Thornton Road, Lodi, California 95240*, August 13, 2009

US EPA, 2009. *Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites*, United States Environmental Protection Agency, Region 9, April 2009

White Slough Water Pollution Control Facility

Monitoring Well Installation Work Plan

Prepared for
City of Lodi
September 2014

WEST YOST

ASSOCIATES
Consulting Engineers

213-06-14-31



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consulting engineers

W A T E R W A S T E W A T E R S T O R M W A T E R

White Slough Water Pollution Control Facility

Monitoring Well Installation Work Plan

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MONITORING WELL INSTALLATION WORK PLAN

White Slough Water Pollution Control Facility



1.0 INTRODUCTION

West Yost Associates (West Yost) has prepared this *Monitoring Well Installation Work Plan* (Work Plan) on behalf of the City of Lodi (City) to facilitate the installation of a new monitoring well at the City's White Slough Water Pollution Control Facility (WPCF). As detailed in this Work Plan, the City anticipates that this proposed monitoring well, which will be identified as WSM-2R, may serve as a replacement for WSM-2, an existing monitoring well at the WPCF. The purpose of this Work Plan is further described below, followed by a description of the organization of this plan.

1.1 Purpose

Agricultural reuse at the WPCF and potential discharge to underlying groundwater is permitted by the *Waste Discharge Requirements and Master Reclamation Permit* (WDRs) Order No. R5-2007-0113-01,¹ which was recently amended by the Central Valley Regional Water Quality Control Board (Regional Board) on October 4, 2013. The WDRs require routine monitoring of an approved network of monitoring wells for groundwater elevation and water quality. The WDRs also include the following specific requirements before an additional monitoring well can be added to this monitoring program, as found in Section VI.A.1 of the Monitoring and Reporting Program (MRP), Attachment E of the WDRs:

Prior to construction and/or sampling of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval.

This Work Plan is intended to provide the necessary information to the Regional Board for approval of adding a monitoring well to the City's monitoring well network.

1.2 Organization

This Work Plan is organized by the following sections:

- Section 1.0 Introduction
- Section 2.0 Overview of the WPCF
- Section 3.0 Rationale for Location
- Section 4.0 Field Procedures
- Section 5.0 Groundwater Monitoring and Reporting
- Section 6.0 Implementation Schedule

In addition, Appendix A contains field forms that will be used as part of the installation, development, groundwater level monitoring, and initial water quality sampling effort for the proposed monitoring well.

¹ Regional Board, 2013, *Order R5-2007-0113-01, Waste Discharge Requirements and Master Reclamation Permit for the City of Lodi White Slough Water Pollution Control Facility, San Joaquin County*, Amended by Regional Board Order R5-2013-0126 on October 4, 2013.



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2.0 OVERVIEW OF THE WPCF

The City owns and operates the WPCF site, which encompasses the main wastewater treatment facilities and 880 acres of surrounding area. The WPCF site is in San Joaquin County along the Interstate 5 (I-5)/Highway 99 corridor between Sacramento and Stockton. Specifically, the WPCF site is located southwest of the City along the west side of I-5 about two miles south of the Highway 12 interchange, as shown on Figure 2-1.

The WPCF treatment facilities are designed to accommodate flows and loads associated with an 8.5 million gallon per day (mgd) average dry weather flow. The WPCF receives and treats municipal wastewater influent from a service area encompassing the City and San Joaquin County's Flag City service area. During the irrigation season (generally mid-April through September), treated municipal effluent is discharged to the WPCF's 328-acre-foot storage ponds for subsequent irrigation on 790 acres of irrigated fields located on the City-owned properties surrounding the treatment facilities.

The City also maintains a separate industrial process water collection and disposal system for several industries within the City. In addition, stormwater from some industrial areas within the City and from some of the irrigated fields surrounding the WPCF is also collected by the industrial collection system. The industrial process water flows are dominated by the flow from the Pacific Coast Producers cannery, a fruit processor that primarily discharges during the fruit canning season (June through September). During the canning season, the industrial wastewater entering the WPCF is blended with treated municipal effluent and is applied directly to the 790-acre reuse area. The remainder of the year, when the industrial wastewater flows are significantly less, the industrial process water (and, at times, stormwater) is stored in the WPCF's storage ponds. Tailwater and stormwater runoff from the irrigated fields is also captured and returned to the storage ponds. In addition, the City land applies Class B biosolids within the 790-acre reuse area.

Throughout the year, the City also provides recycled water (tertiary treated municipal effluent) to two Northern California Power Agency (NCPA) power plants, primarily for steam production and cooling water, as well as to the San Joaquin County Mosquito and Vector Control District for use in fish-rearing ponds.

Municipal effluent not needed to satisfy the irrigation demands on the 790-acre reuse area is discharged to Dredger Cut, a dead end slough of the Sacramento-San Joaquin River Delta. From approximately September through April, all of the WPCF effluent is discharged to Dredger Cut.

3.0 RATIONALE FOR LOCATION

The City is currently preparing a Best Practicable Treatment or Control (BPTC) Study pursuant to Provision VI.C.5.a of the WDRs. As part of preparing this BPTC Study and evaluating groundwater water quality data for the last several years, the City has come to suspect that the City's existing monitoring well WSM-2 may have been damaged during construction of tertiary improvements to the WPCF, which were completed in January 2009. If WSM-2 is indeed damaged, samples from this well may not be providing representative groundwater quality information.



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Therefore, the City's long-term goal for installing the new monitoring well WSM-2R is to replace the function of WSM-2, such that the City could then properly abandon WSM-2. A detailed justification for replacing WSM-2 with WSM-2R cannot be made until sufficient water quality data from WSM-2R are available. Therefore, if this justification is possible based on the data, it will need to be detailed in a later report.

Nevertheless, reviewing the nitrate data for WSM-2 is helpful in discussing the rationale for the proposed WSM-2R location. Historical nitrate data (1989-2014) for WSM-2 is shown on Figure 3-1, which also includes historical groundwater elevation data for this well. In addition, because the recycled water from the WPCF is stored in the WPCF ponds prior to irrigation reuse, Figure 3-1 also includes recent (2008-2013) nitrate and total nitrogen (ammonia plus nitrate plus nitrite) data for the ponds.

As shown on Figure 3-1, the variability and maximum nitrate concentrations for WSM-2 have substantially changed since about January 2009, when the tertiary improvements were completed. The area around WSM-2 was used for staging during the construction and thus subject to truck traffic and surface pressures that could have potentially damaged the well. The recent maximum nitrate concentrations in WSM-2 are well above both the nitrate and total nitrogen concentrations measured in the ponds. These maximum concentrations in WSM-2 thus appear to be unrelated to the City's irrigation reuse activities.

The locations of the City's existing monitoring wells are included on the Site Map (Figure 2-1). As described above, the proposed monitoring well may eventually replace the function of the existing monitoring well WSM-2. Figure 3-2 shows an aerial photograph map of the area around WSM-2 and the proposed location for WSM-2R. The aerial photograph indicates other nearby surface features, including the WPCF ponds (within the scale of the map) and the nearby NCPA power plant facilities.

The specific criteria used to determine the location for WSM-2R are as follows:

1. **Vicinity to WSM-2:** As a potential replacement well for WSM-2, WSM-2R is logically placed near WSM-2.
2. **Vicinity to WPCF and Irrigation Areas:** Unlike some of the City's other compliance monitoring wells, WSM-2 is not located within an irrigated field but in an adjacent area. The intent of the compliance monitoring wells is to obtain data representing WPCF operations. Therefore, relative to WSM-2, WSM-2R is placed closer to the WPCF ponds and irrigation areas just west of the ponds. The location of WSM-2R is specifically about 70 feet away from WSM-2, north and a little east of it, as shown on Figure 3-2.
3. **Avoidance of Overhead Power Lines:** The approximate locations of nearby overhead power lines are also shown on Figure 3-2. While a location even closer to the WPCF ponds and irrigated fields might be desirable, these power lines would be a hazard to a drilling rig and thus interfere with construction of the proposed well.



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4. **Accessibility:** As evident on Figure 3-2, WSM-2R would be accessible via the same service road south of the NCPA Power Plant and dirt pathway near WSM-2 that are currently used to access WSM-2.
5. **Similar Physical Environment as WSM-2:** WSM-2R will be located in an area with soils, geology, and land use similar to those for WSM-2, based on soil, geology, and land use mapping prepared as part of the City's 2006 "Existing Conditions Report."²

4.0 FIELD PROCEDURES

This section details the field procedures that will be used to implement the Work Plan, presented for the following topics:

- Notifications and Permits
- Monitoring Well Installation
- Monitoring Well Development
- Equipment Decontamination
- Soil Cuttings and Purge Water Disposal
- Monitoring Well Coordinate Survey

4.1 Notifications and Permits

Several parties will require notification either prior to or during construction of the proposed monitoring well. Table 4-1 includes a description of the parties requiring notification and the details of the notifications, including obtaining a drilling permit from the San Joaquin County Environmental Health Department (EHD).

As an added precaution to notifying USA North, non-intrusive geophysical techniques or hand augering may be used to determine if any potential subsurface hazards exist prior to drilling. The proposed drilling location may be revised slightly to avoid any potential subsurface hazards or obstructions identified by clearance surveys.

² West Yost, 2006, *City of Lodi Water Pollution Control Facility Soil and Groundwater Investigation Existing Conditions Report*, Prepared for the City of Lodi, September 2006.

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Table 4-1. Description of Notifications and Permits

Party Requiring Notification	Party Conducting Notification	Details of Notification
Regional Board Executive Officer	City/West Yost	Notify at least five (5) working days before commencing site work.
San Joaquin County EHD	Drilling contractor	Prior to well construction, obtain a drilling permit, and mark the approved drilling location prior to mobilization.
		Notify 24 hours in advance of completing the well seal (See Section 4.2.2).
		If a borehole is drilled but not used for the ultimate monitoring well, notify 24 hours in advance of borehole abandonment. (See Section 4.2.3).
USA North ^(a)	City/West Yost	Notify at least 48 hours prior to drilling to allow for the location of any known or identified underground utilities or other hazards to be painted on the ground surface.

^(a) Underground Service Alert of Northern/Central California and Nevada

4.2 Monitoring Well Installation

The proposed monitoring well will be installed using a hollow-stem auger with an 8-inch inside diameter to allow a minimum sand pack thickness of two inches between the well and the casing wall. The borehole will be drilled to a depth that will ensure the setting of the well screen at the appropriate interval while providing adequate space to accommodate a bottom well cap and approximately one foot of sand pack below the screen. The proposed well, WSM-2R, is expected to be drilled to approximately the 30 feet below grade (Figure 4-1). The actual well depth, and the depth intervals for the placement of perforated intervals, filter pack and annular seals will be determined based on the hydrogeologic conditions encountered during drilling.

4.2.1 Borehole Logging

An experienced field geologist (or engineer) supervised by a California Professional Geologist will lead all field activities, including soil logging and well installation. The field geologist will record observations on boring logs in accordance with the Unified Soil Classification System (ASTM D2488). A boring log/well construction diagram is included in **Appendix A**. The information recorded will include soil classification, density or consistency, color, soil name, moisture content, and particle size distribution. The boring log will also contain observations related to drilling activities, including methods, equipment, drilling rates, well construction, and any unusual conditions encountered during drilling. A California Professional Geologist will review and approve the soil boring log.



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Soil sampling will be conducted of the borehole at 5-foot intervals for visual classification of soils using the following procedure.

- The borehole will be drilled to the desired sampling depth.
- The modified split-spoon will be loaded with three 2-inch-diameter by 6-inch-long brass tubes and attached to the drill rod.
- The drill rod with the split-spoon sampler will then be deployed to the bottom of the borehole and advanced using a percussion hammer (140-pound hammer with a standard 30-inch drop) across the sampling interval (18 inches).
- The drill rod and sampler will then be retrieved from the borehole, the split-spoon sampler will be split apart, and the sample containers (tubes) will be collected. The lower two tubes will be used for visual-manual soil description.

The field geologist will also maintain daily field logs that will include information on the date and time of arrival, general site conditions, and other applicable field observations relating to the installation.

4.2.2 Well Materials and Construction Procedures

The well riser casing will be constructed of 2-inch diameter, square-threaded and flush-jointed Schedule 40 polyvinyl chloride (PVC) well pipe (Figure 4-1). The well screen will be 2-inch diameter, slotted Schedule 40 PVC pipe. If flowing sands or excessively fine soils are encountered, a field decision will be made to include a 5-foot blank section of casing (sand sump) below the screen. The well will be provided with a PVC top cap and locking cover.

The sand filter pack will consist of Lonestar #2/12, or similar, washed sand. The well will be screened across the first occurrence of groundwater. The screen length for the monitoring well will be 15 feet, set with the bottom of the screen approximately ten feet below the anticipated lowest annual static water level. Actual depths and construction details will be based on conditions encountered during drilling.

A well screen slot size of 0.020 inches will be used, a size that will retain 90 percent or more of the selected filter pack material. A bentonite slurry will be used as a seal above the sand pack to prevent downward seepage along the casing. The remainder of the annulus will be grouted with 7 gallon/sack neat cement.

The well will be installed through the inside of the hollow-stem auger to prevent the collapse of the boring wall. The casing will be extracted one section at a time as sufficient well materials are placed in the borehole to offset the earth pressure acting against the boring wall. Initially, one to two feet of sand pack will be placed in the bottom of the boring. The well screen with attached PVC plug will be placed on this sand pack. Unperforated 2-inch diameter PVC casing will complete the upper portions of the well. A sand pack will be placed in the annular space between the well screen and the boring wall. The sand pack will be placed to approximately two feet above the top of the well screen. A minimum of one foot of bentonite slurry will be placed above the uppermost sand pack as a seal.



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A weighted survey tape or equivalent will be used to check depths and volume placed. A tremie pipe will be used to place cement slurry from the top of the bentonite slurry to the ground surface to seal the annulus. As indicated in Table 4-1, the EHD will be notified 24 hours in advance completing the well seal.

Similar to the nearby well WSM-2, the PVC well casing will protrude approximately three feet above grade and be enclosed in a minimum 8-inch diameter steel protective outer casing embedded approximately three feet into the cement seal (Figure 4-1). The steel casing will be equipped with a locking lid. A 4-foot by 4-foot by 6-inch sloping concrete pad, equipped with four 42-inch traffic bollards, will also be constructed around the well. The monitoring well identification number (WSM-2R) will be painted on the outside of the steel protective casing.

4.2.3 Borehole Abandonment

If applicable, any borings not converted into the monitoring well will be destroyed according to California Department of Water Resources and EHD guidelines. A grout mixture consisting of Type I or II Portland cement with three to five percent bentonite clay mixed with eight to ten gallons of potable water per sack of cement will be used. The grout mixture will be gravity fed into the borehole via a tremie pipe as the augers are pulled from the hole. After 24 hours, additional grout will be placed in the boreholes if settlement has occurred. Borehole abandonment will be documented on the boring log. As indicated in Table 4-1, the EHD will be notified 24 hours in advance of borehole abandonment.

4.3 Monitoring Well Development

At least 24 hours following construction, the well will be developed by alternating bailing with a close-fitting bailer and surging with a vented surge block. After any sediment has been removed from the bottom of the well casing, development will continue by pumping with a decontaminated submersible pump. The well development will continue until pH, temperature, and specific conductance measurements have stabilized and the water is clear and colorless, if possible.

Stabilization shall be defined as agreement between the last two sets of readings within plus or minus 0.1 pH units, plus or minus 1.0°C, and plus or minus 10 percent of full scale reading for specific conductivity. If parameters have not stabilized during the removal of three cased well volumes, then a maximum of five well volumes will be removed. A record of the well development will be maintained using the Water Quality Stabilization Record included in Appendix A.



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4.4 Equipment Decontamination

Before entering the site, the drilling rig, drilling tools, and equipment will be cleaned. Cleaning will consist of scraping, brushing, and washing with water until surfaces are visibly free of soil buildup. All downhole equipment will be decontaminated before site departure and between each onsite setup (if multiple boreholes are drilled). The following procedures will be used to decontaminate the downhole drilling equipment until surfaces are visibly free of loose soil:

- Scrape or brush off residue
- Steam rinse
- Air dry

The residual soils generated during onsite decontamination will be placed into 55-gallon drums and/or open-top soil bins and disposed of in accordance with details in Section 4.5. This same procedure will be used for the drilling equipment that comes into contact with soil materials during drilling.

Field instruments will be decontaminated before and after each use. The following procedures will be used to decontaminate those portions of the field testing instruments (e.g., water level meter, pH/conductivity/temperature meter) and sampling equipment (purge pumps) that come into direct contact with groundwater:

- Rinse twice with deionized water
- Air dry

4.5 Soil Cuttings and Purge Water Disposal

Soil cuttings generated during drilling will be spread on the ground around the well. Groundwater generated during well development and sampling events will be temporarily stored and then discharged to the WPCF ponds.

4.6 Monitoring Well Coordinate Survey

The final monitoring well location will be measured by a licensed surveyor according to the following specifications:

- Horizontal coordinates measured to the nearest 1.0 foot, referenced to California State Coordinate System and the North American Datum of 1983 (NAD 83).
- Elevations measured as follows, referenced to the North American Vertical Datum of 1988 (NAVD 88):
 - Elevation at the top of the PVC well casing, measured to the nearest 0.01 feet.
 - Elevation at the top of the concrete pad surrounding the well, measured to the nearest 0.1 feet.



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- The measurement point on the casing will be clearly and permanently marked for future water level measurements.
- The location on the pad will also be permanently marked.

5.0 GROUNDWATER MONITORING AND REPORTING

The City will measure the depth to groundwater in the new monitoring well at least 48 hours after well development. An initial water quality sample, as well as a concurrent sample from well WSM-2, will be collected following the depth measurement. The depth measurement and sample collection will be performed consistent with the monitoring requirements for the existing monitoring wells as specified in Section VI.A.1 of the MRP. This initial water quality sample from the new well and the concurrent sample from WSM-2 will be analyzed for the parameters specified in Table E-8 of the MRP.

The Monitoring Well Installation Report will be submitted to the Regional Board to document the monitoring well logging, construction, and development; the surveyed coordinates; and the results of the initial sampling event. The Monitoring Well Installation Report will be submitted with the City's next quarterly groundwater monitoring report following receipt of the analytical results from the initial monitoring event. The City will also include relevant construction and water quality information for the new monitoring well in the BPTC Study Report.

6.0 IMPLEMENTATION SCHEDULE

As mentioned above, the City is in the process of evaluating BPTC efforts at the WPCF, and will soon be preparing a BPTC Study Report to document the evaluation of BPTC efforts conducted over the last several years. The City would also like to include an evaluation of water quality data from the proposed well in the BPTC Study Report, as a preliminary step to potentially decommissioning WSM-2. If the proposed well can be installed by September of this year, we anticipate being able to collect at least three monthly samples. The results of this sampling could be evaluated as part of the BPTC Study Report, which will be submitted to the Regional Board by February 1, 2015.

The City would prefer to implement the Work Plan immediately upon receipt of written approval from the Regional Board, which we understand may take 30 days or more. However, installation of the monitoring well in September is necessary to meet the schedule outlined above for the BPTC Study Report. Therefore, if the City has not heard from the Regional Board by Monday, September 22, 2014, the City will proceed with implementing the Work Plan prior to receiving formal approval. In either case, as indicated in Table 4-1, the Regional Board Executive Officer will be notified at least five working days before commencing site work.

Summarized in Table 6-1 are the anticipated completion dates for the major tasks described in this Work Plan.

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Table 6-1. Work Plan Implementation Schedule

Task	Anticipated Completion Date	
	Relative Date	Calendar Date
Notify Regional Board that well construction will begin	At least 5 working days prior to construction	Fri., Sep. 12, 2014
Contact USA North	At least 48 hours prior to construction	Wed., Sep. 17, 2014
Obtain drilling permit from EHD	At least 1 day prior to construction (needed by the day of construction)	Fri., Sep. 19, 2014
Begin monitoring well construction	After completing the tasks listed above	Mon., Sep. 22, 2014
Notify EHD of well seal completion	24 hours prior to completing well seal ^(a)	Mon., Sep. 22, 2014
Conduct well development	24 hours after well construction ^(a)	Wed., Sep. 24, 2014
Conduct initial depth and water quality monitoring	48 hours after well development	Fri., Sep. 26, 2014
Submit Monitoring Well Installation Report	With next quarterly groundwater monitoring report following receipt of the analytical results from the initial monitoring event.	To be determined based on receipt of analytical results

^(a) Well construction is assumed to require 2 days.

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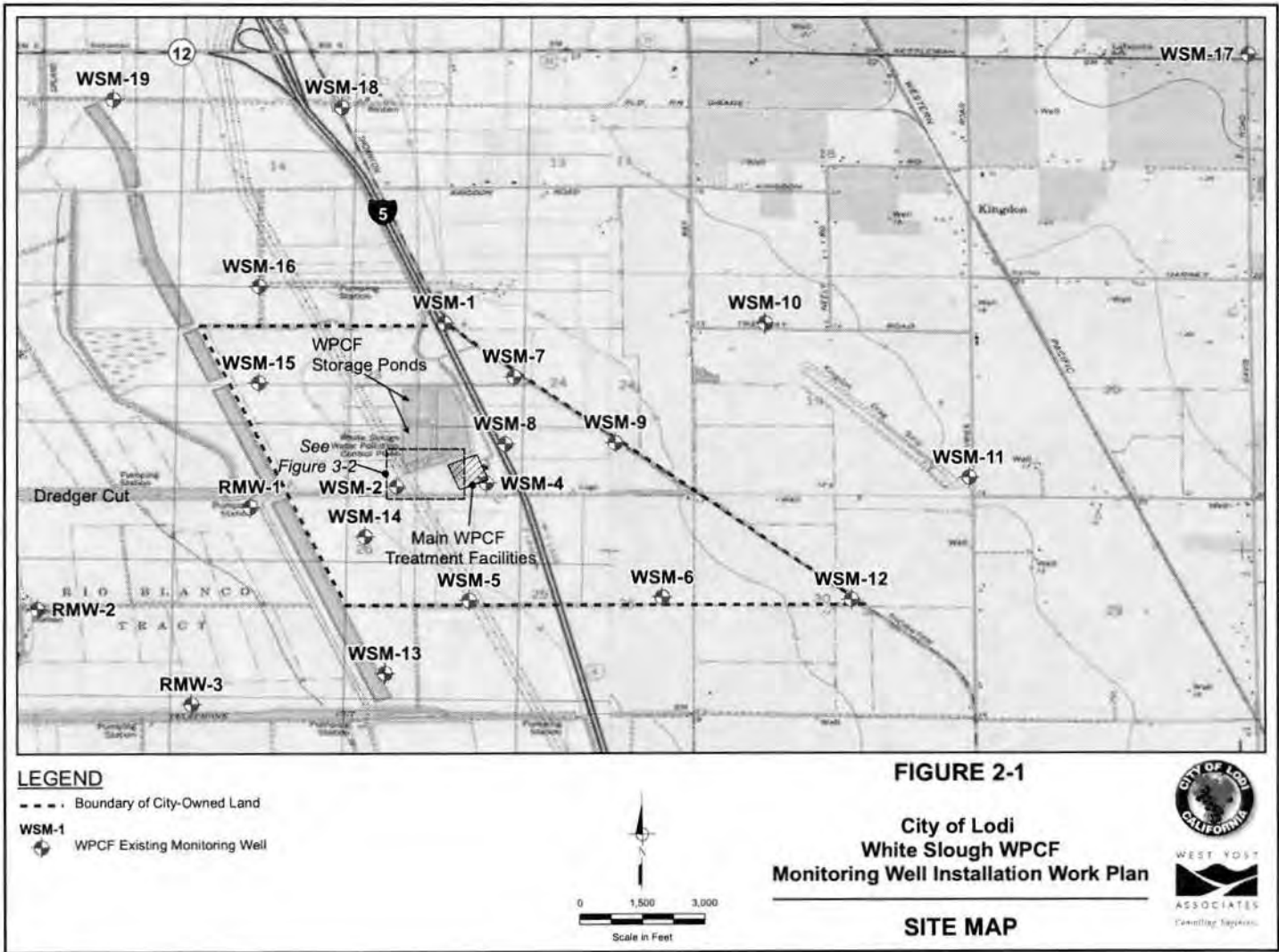
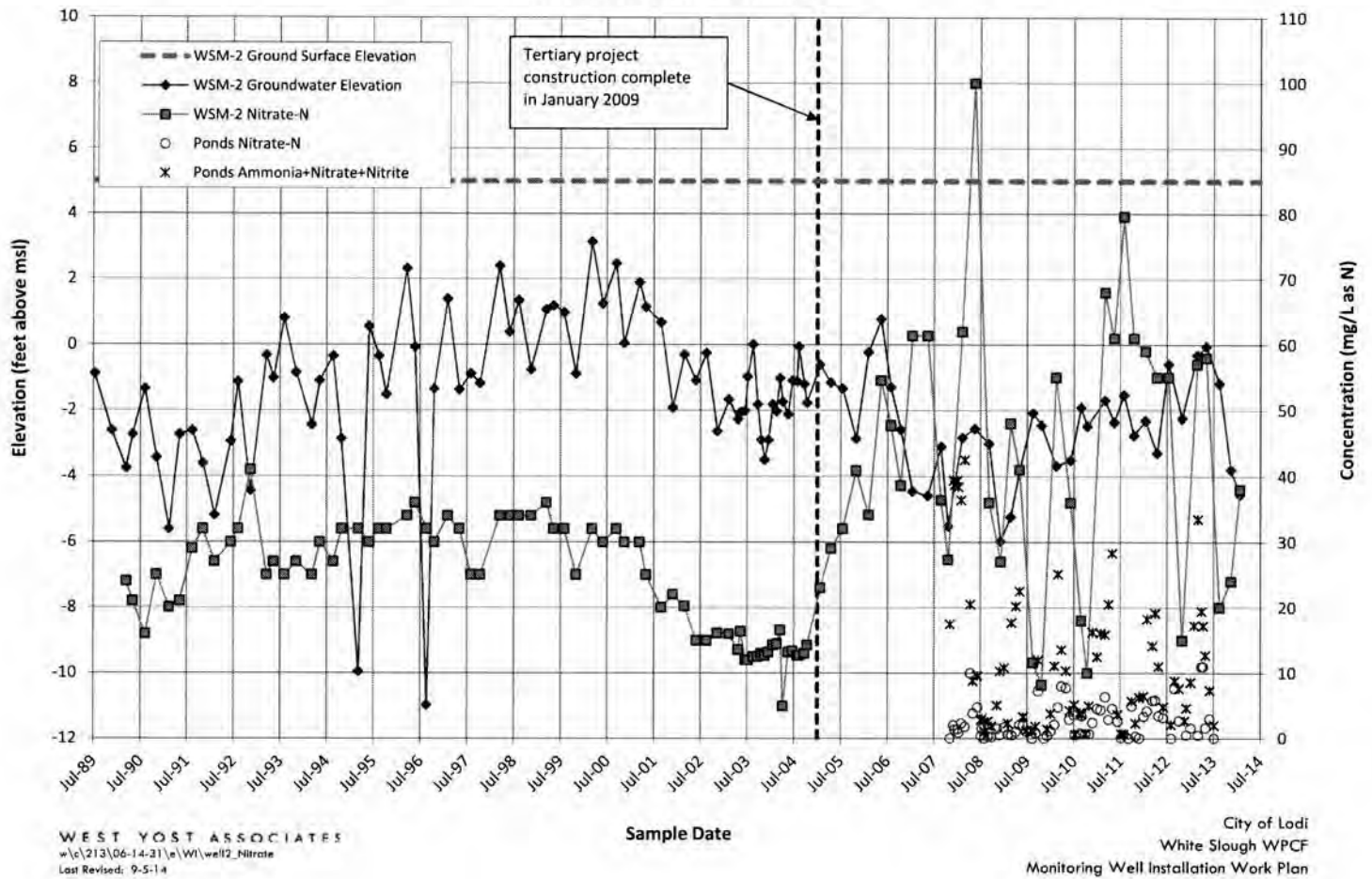





Figure 3-1. Historical Groundwater Elevation and Nitrate Data for Monitoring Well WSM-02 and Recent Nitrogen and Nitrate Data for WPCF Ponds



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LEGEND

- WSM-2R**
 Proposed Monitoring Well
- WSM-2**
 WPCF Existing Monitoring Well
-  Overhead Power Lines (Approximate Location)

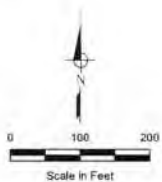


FIGURE 3-2

City of Lodi
White Slough WPCF
Monitoring Well Installation Work Plan
PROPOSED WELL LOCATION MAP



The diagram illustrates a well completion system with a vertical scale on the left ranging from 0 to 30 feet. The right side shows a cross-section of the well with various components labeled. The depth to groundwater is indicated by two horizontal lines: the top line represents the 'Anticipated Minimum Depth to Groundwater' and the bottom line represents the 'Anticipated Maximum Depth to Groundwater'. The well components include an 'Above Ground Surface Completion (not to scale)' at the top, a 'Neat Cement Annular Seal (7 gallons/sack)' at approximately 3 feet, a 'Bentonite Slurry Transition Seal' at approximately 4 feet, a '2-inch Diameter Schedule 40 PVC Blank Well Casing with Flush Threaded Fittings' from 5 to 7 feet, a 'Lonestar #2/12 Sand Filter Pack' from 7 to 22 feet, a '2-inch Diameter PVC Well Screen with 0.02-inch Openings and Flush Threaded Fittings' from 22 to 27 feet, and a '5-foot Schedule 40 PVC Well Sump with Threaded End Cap' from 27 to 30 feet. The 'Total Depth of Borehole' is marked at 30 feet.

0

5

10

15

20

25

30

Anticipated Minimum Depth to Groundwater

Anticipated Maximum Depth to Groundwater

Notes:

1. Above ground surface completion will consist of an 8-inch diameter above ground well vault with locking lid, 4-foot by 4-foot sloped concrete pad, and four 42-inch traffic bollards. Well vault will be set three feet below ground surface into the cement seal, and have three feet of above ground stick-up.
2. Blank well casing will have a 3-foot above ground stick-up and slip-on well cap.
3. Stainless steel casing centralizers will be placed above and below the well screen.
4. The final design of the well will depend on the subsurface conditions encountered during drilling.

Above Ground Surface Completion (not to scale)

Neat Cement Annular Seal (7 gallons/sack)

Bentonite Slurry Transition Seal

2-inch Diameter Schedule 40 PVC Blank Well Casing with Flush Threaded Fittings

Lonestar #2/12 Sand Filter Pack

2-inch Diameter PVC Well Screen with 0.02-inch Openings and Flush Threaded Fittings

5-foot Schedule 40 PVC Well Sump with Threaded End Cap

Total Depth of Borehole

Depth (feet bgs)

3

4

5

7

22

27

30

PROJ. NO. 213.06-14-31

APPENDIX C

Historical Aerial Photographs



HISTORICAL **AERIALS**

Project Property: NCPA Phase I
NCPA LEC Site
Lodi CA 95242

Requested By: Geosyntec Consultants

Order No: 20200211204

Data Completed: February 13,2020

Environmental Risk Information Services

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Date	Source	Source Scale	Comments
2018	National Agriculture Information Program	1" to 500'	
2016	National Agriculture Information Program	1" to 500'	
2014	National Agriculture Information Program	1" to 500'	
2012	National Agriculture Information Program	1" to 500'	
2010	National Agriculture Information Program	1" to 500'	
2009	National Agriculture Information Program	1" to 500'	
2006	National Agriculture Information Program	1" to 500'	
2005	National Agriculture Information Program	1" to 500'	
1998	US Geological Survey	1" to 500'	
1993	US Geological Survey	1" to 500'	
1987	US Geological Survey	1" to 500'	Best Copy Available
1974	US Geological Survey	1" to 500'	
1968	US Geological Survey	1" to 500'	
1957	Agriculture and Soil Conservation Service	1" to 500'	

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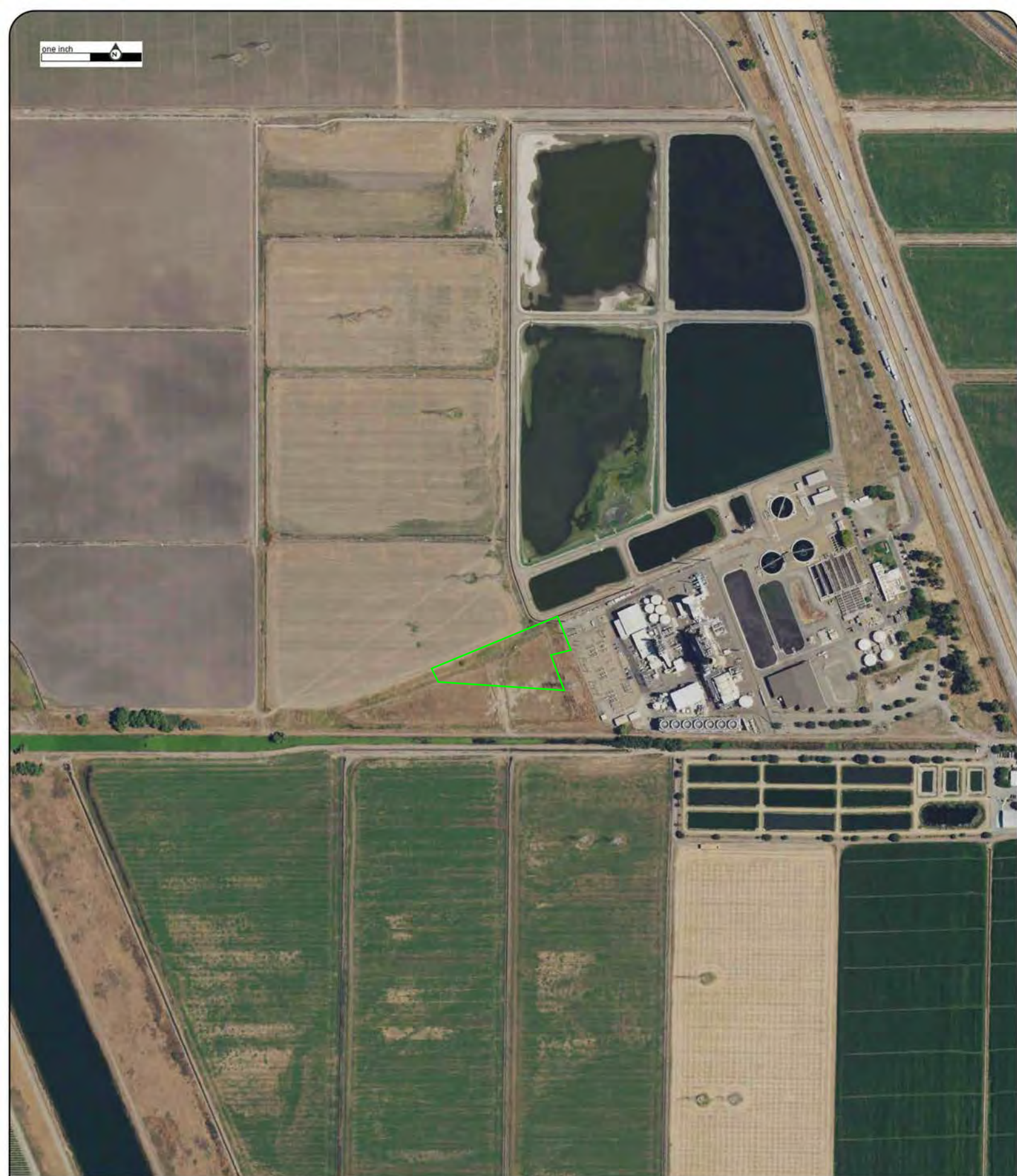
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Comment:

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Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





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Source:NAIP
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Comment:

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Approx Center:38.08791853/-121.38967829

Order No:20200211204

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ENVIRONMENTAL RISK INFORMATION SERVICES



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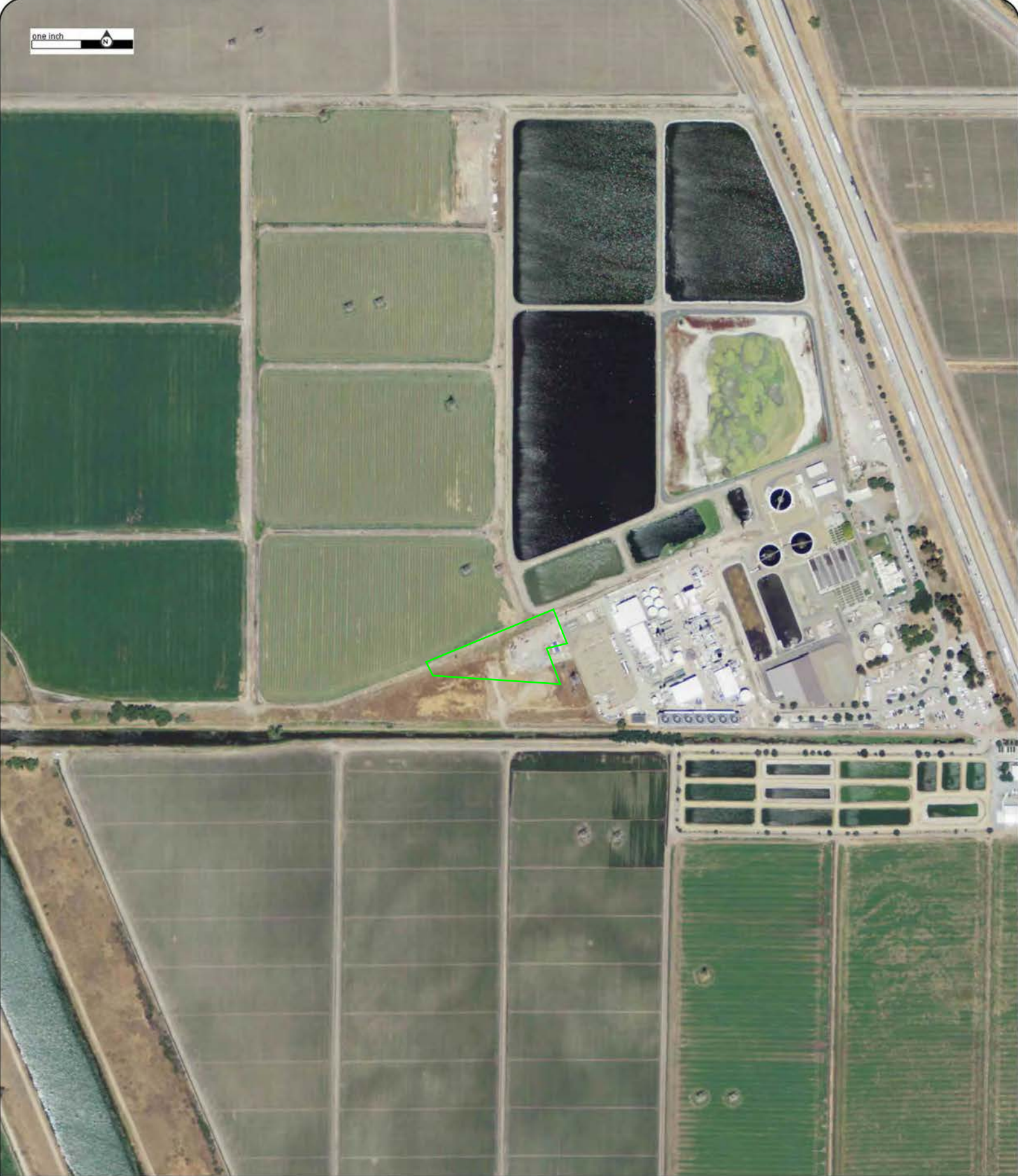
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Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





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Order No:20200211204

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ENVIRONMENTAL RISK INFORMATION SERVICES





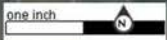
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Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





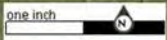
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ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





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Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





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Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





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Comment:

Address:NCPA LEC Site,Lodi,CA
Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





Year:1993
Source:USGS
Scale:1" to 500'
Comment:

Address:NCPA LEC Site,Lodi,CA
Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





Year:1987

Address:NCPA LEC Site,Lodi,CA

Order No:20200211204

Source:USGS

Approx Center:38.08791853/-121.38967829

Scale:1" to 500'

Comment:Best Copy Available

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





Year:1974
Source:USGS
Scale:1" to 500'
Comment:

Address:NCPA LEC Site,Lodi,CA
Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





Year:1968
Source:USGS
Scale:1" to 500'
Comment:

Address:NCPA LEC Site,Lodi,CA
Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES





Year:1957
Source:ASCS
Scale:1" to 500'
Comment:

Address:NCPA LEC Site,Lodi,CA
Approx Center:38.08791853/-121.38967829

Order No:20200211204

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



APPENDIX D

Historical Topographic Maps



TOPOGRAPHIC MAPS

Project Property:	NCPA Phase I NCPA LEC Site Lodi CA 95242
Project No:	SAC278
Requested By:	Geosyntec Consultants
Order No:	20200211204
Date Completed:	February 12, 2020

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2015	7.5
1997	7.5
1993	7.5
1978	7.5
1969	7.5
1952	7.5
1910	7.5
1942	15
1939	15

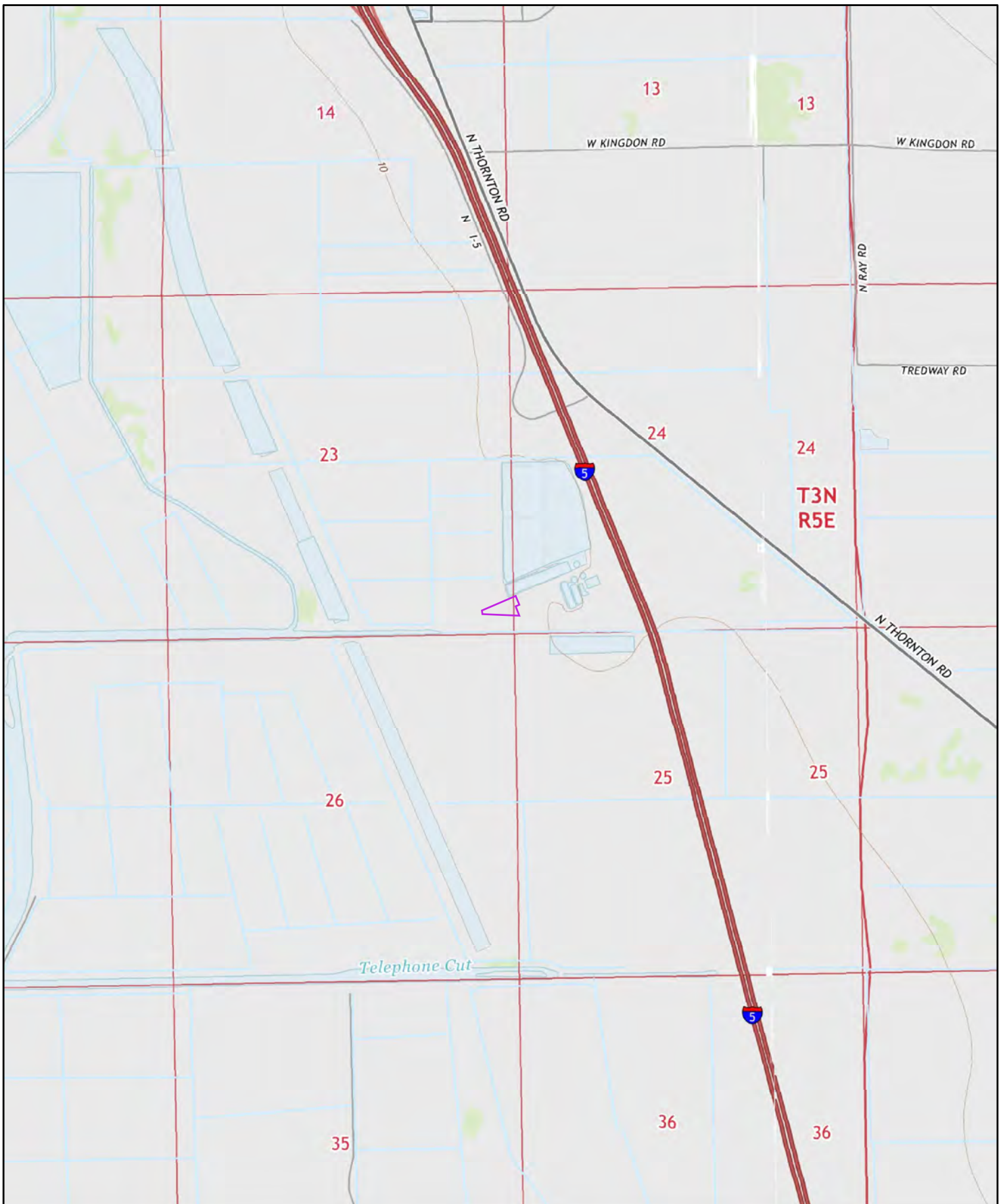
Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with 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.

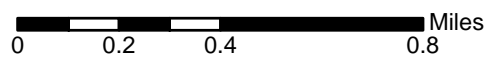
Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com



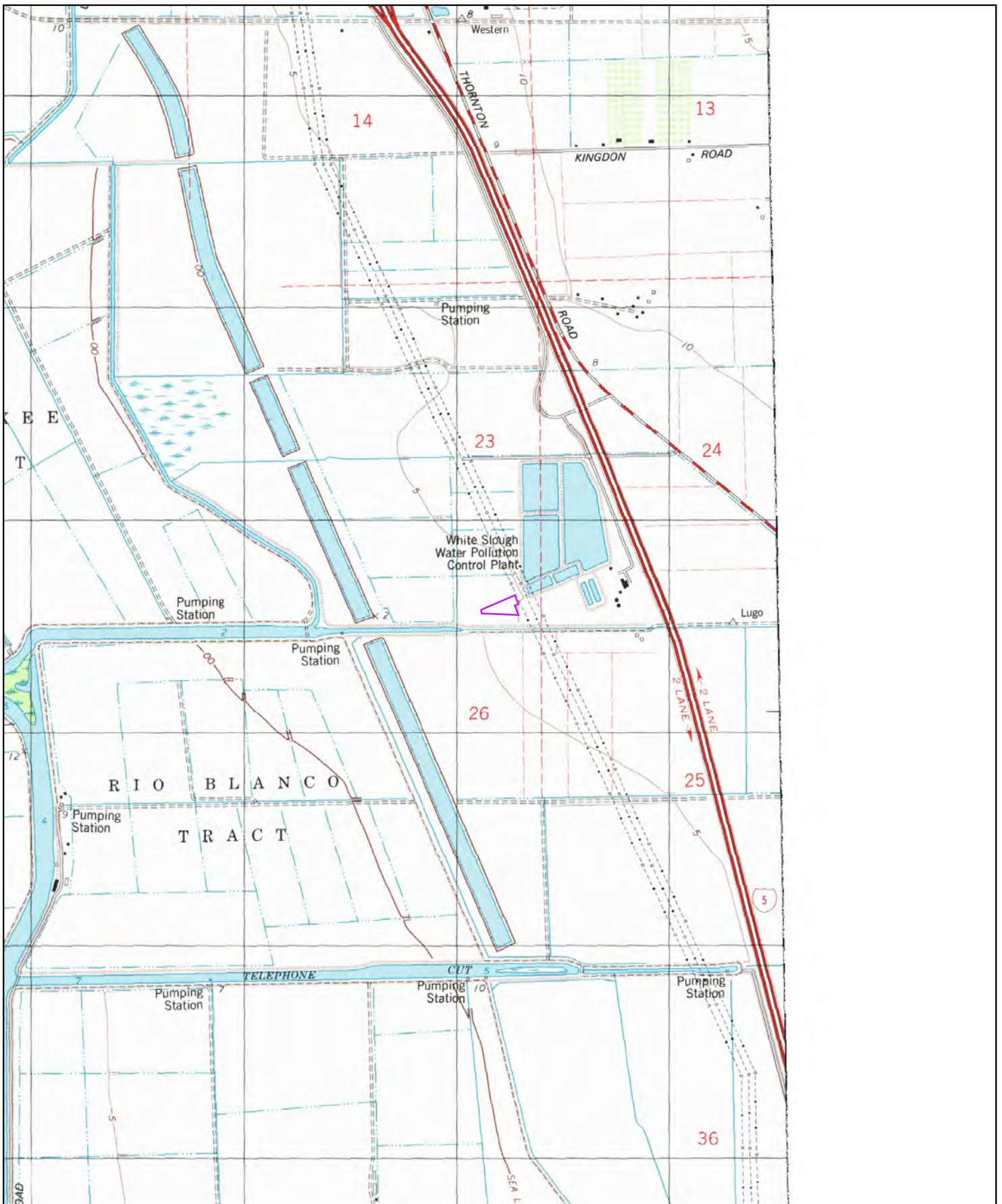
2015



Order No. 20200211204

Quadrangle(s): Terminous, CA

Source: USGS 7.5 Minute Topographic Map



1997

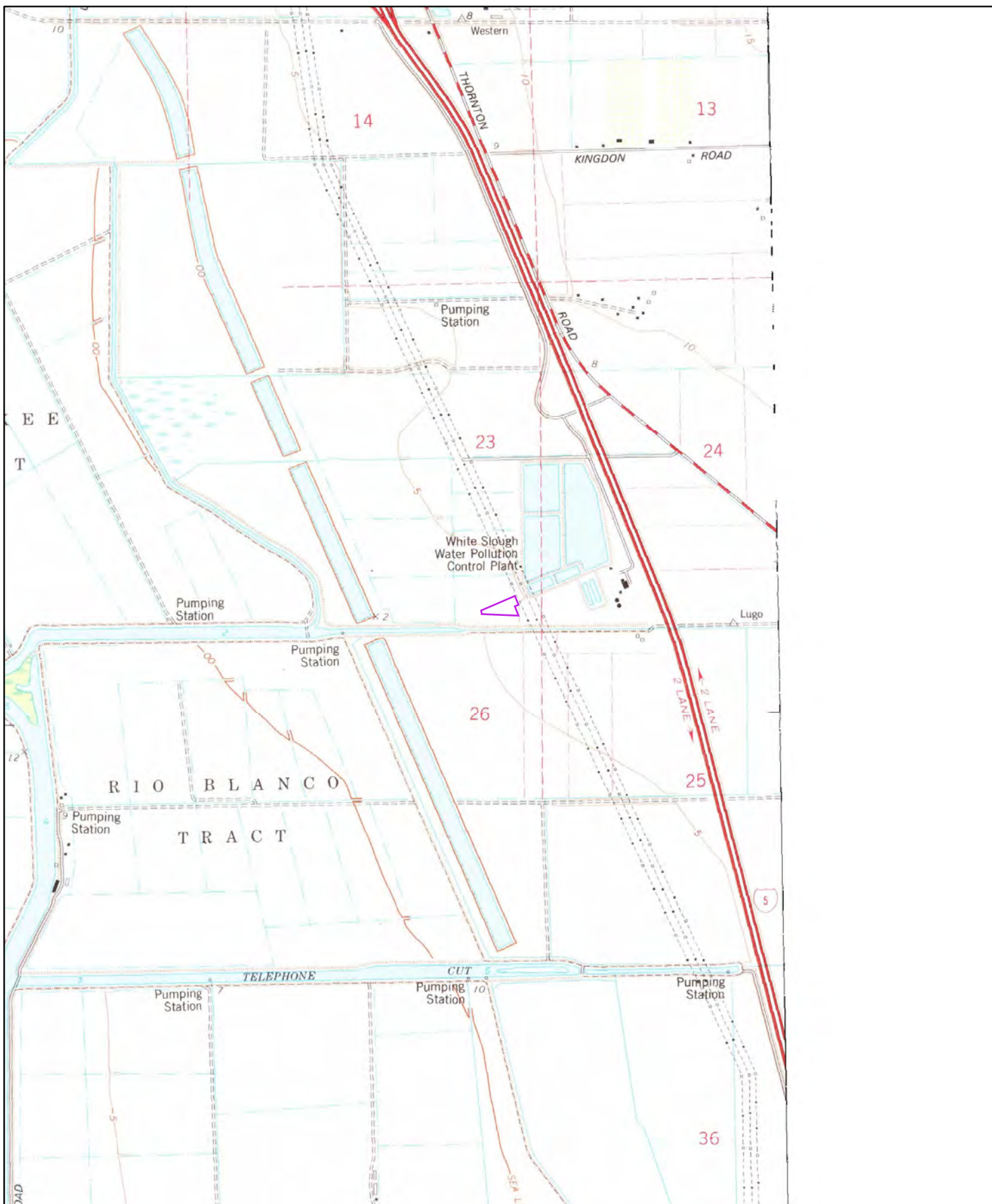
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Order No. 20200211204

Quadrangle(s): Terminus, CA

Source: USGS 7.5 Minute Topographic Map





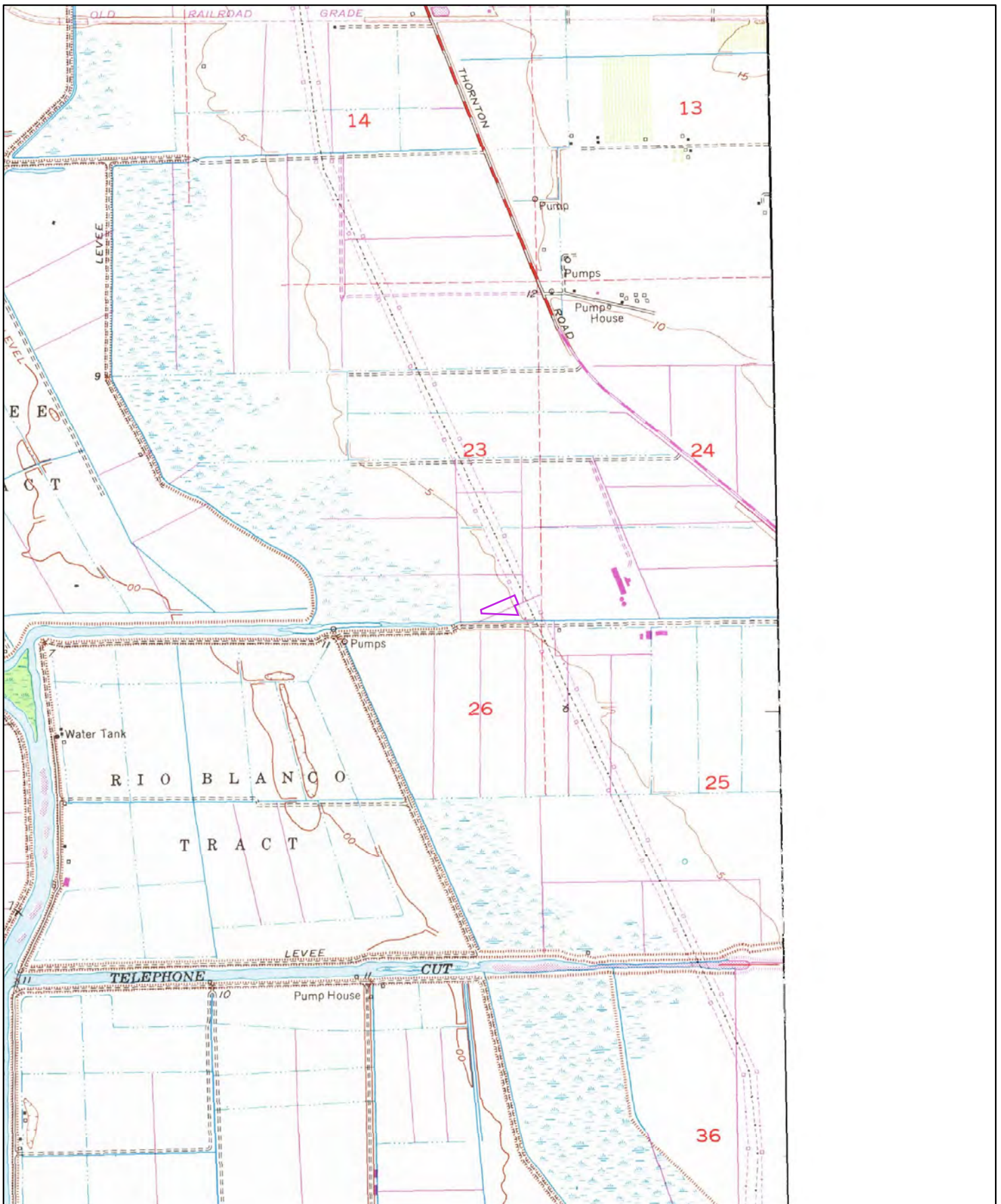
1978

0 0.2 0.4 0.8 Miles

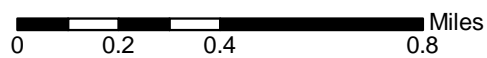
Order No. 20200211204

Quadrangle(s): Terminous, CA

Source: USGS 7.5 Minute Topographic Map



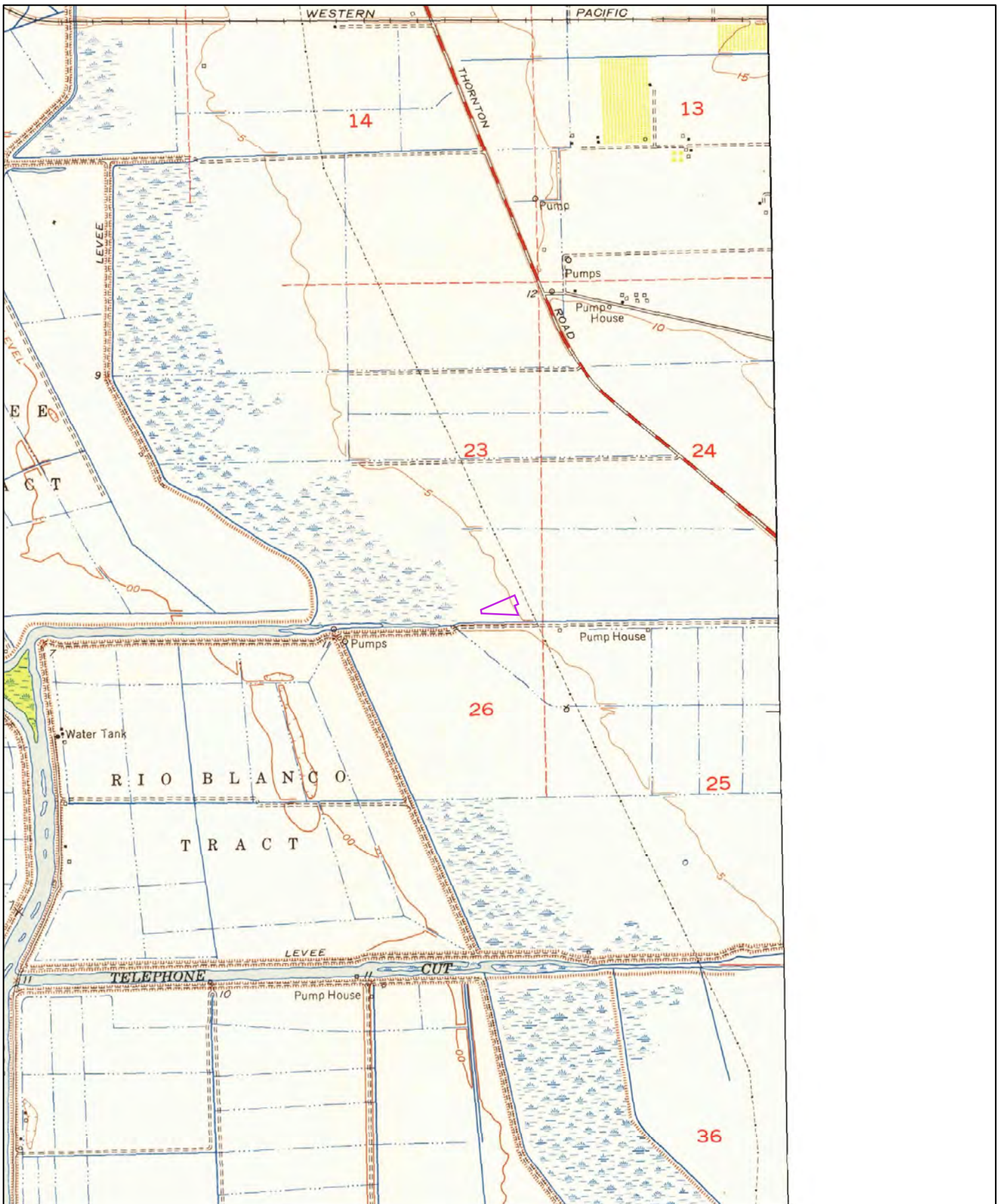
1969



Order No. 20200211204

Quadrangle(s): Terminous, CA

Source: USGS 7.5 Minute Topographic Map



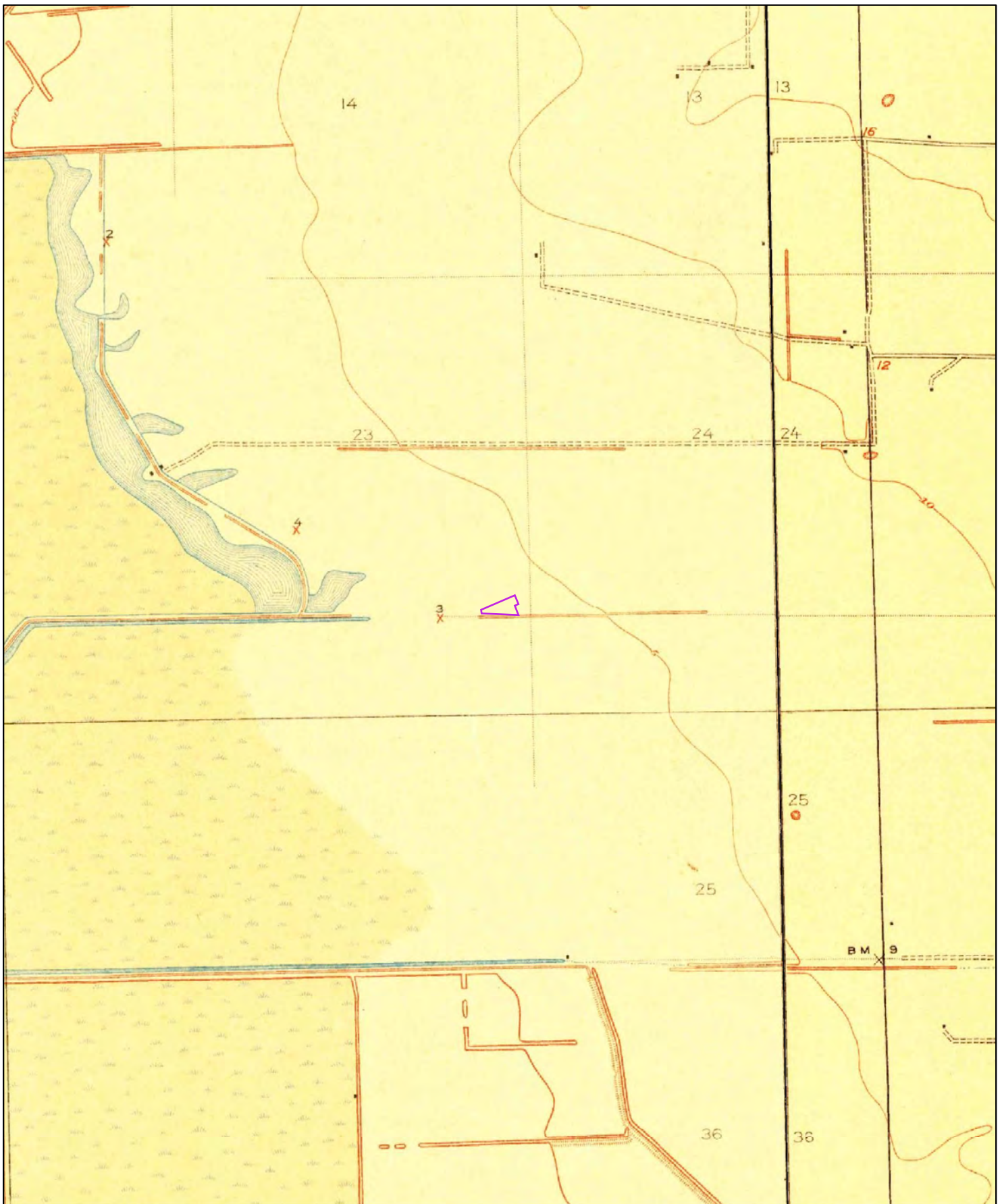
1952

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Order No. 20200211204

Quadrangle(s): Terminous, CA

Source: USGS 7.5 Minute Topographic Map



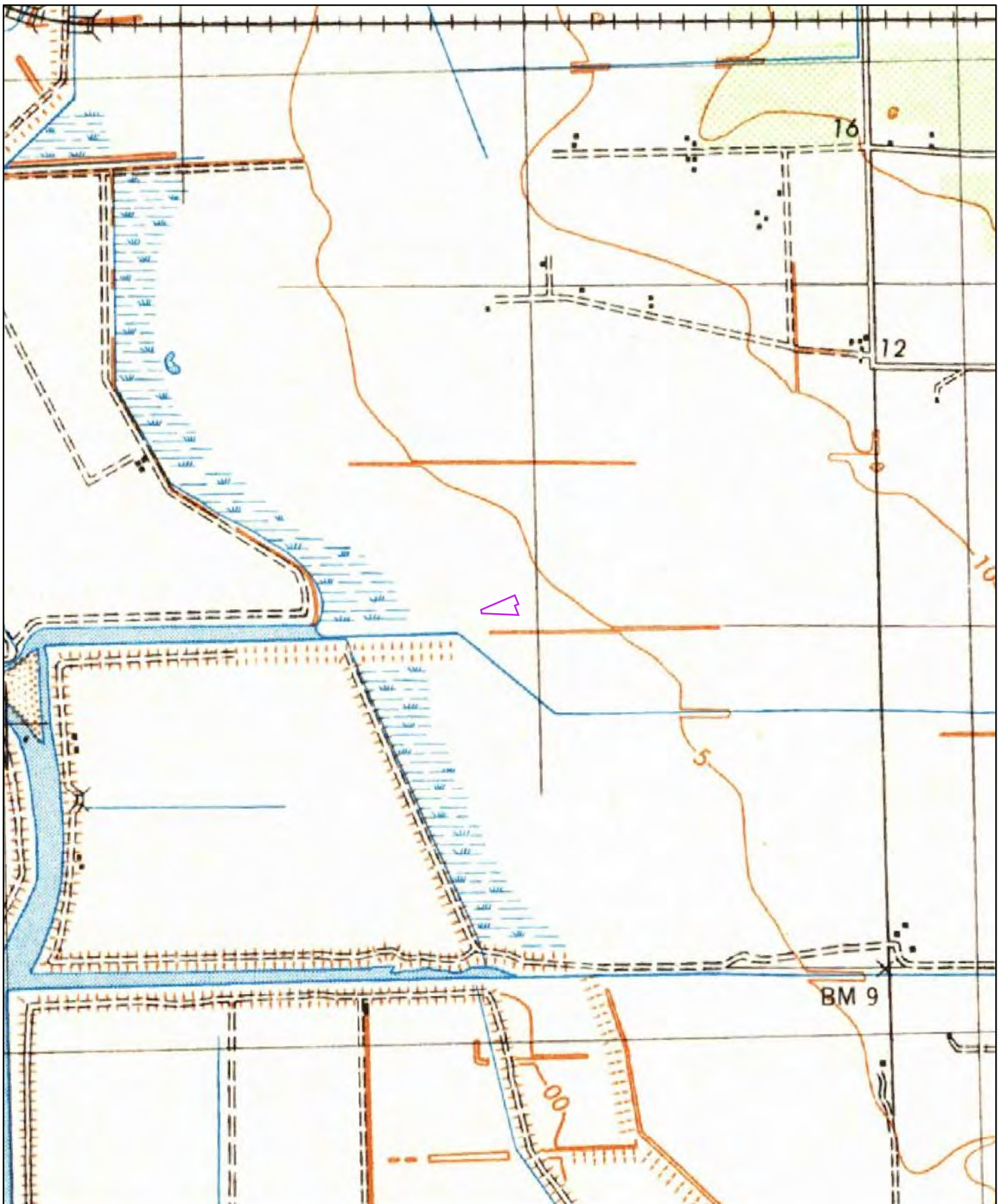
1910

0 0.2 0.4 0.8 Miles

Order No. 20200211204

Quadrangle(s): Headreach, CA

Source: USGS 7.5 Minute Topographic Map



1942

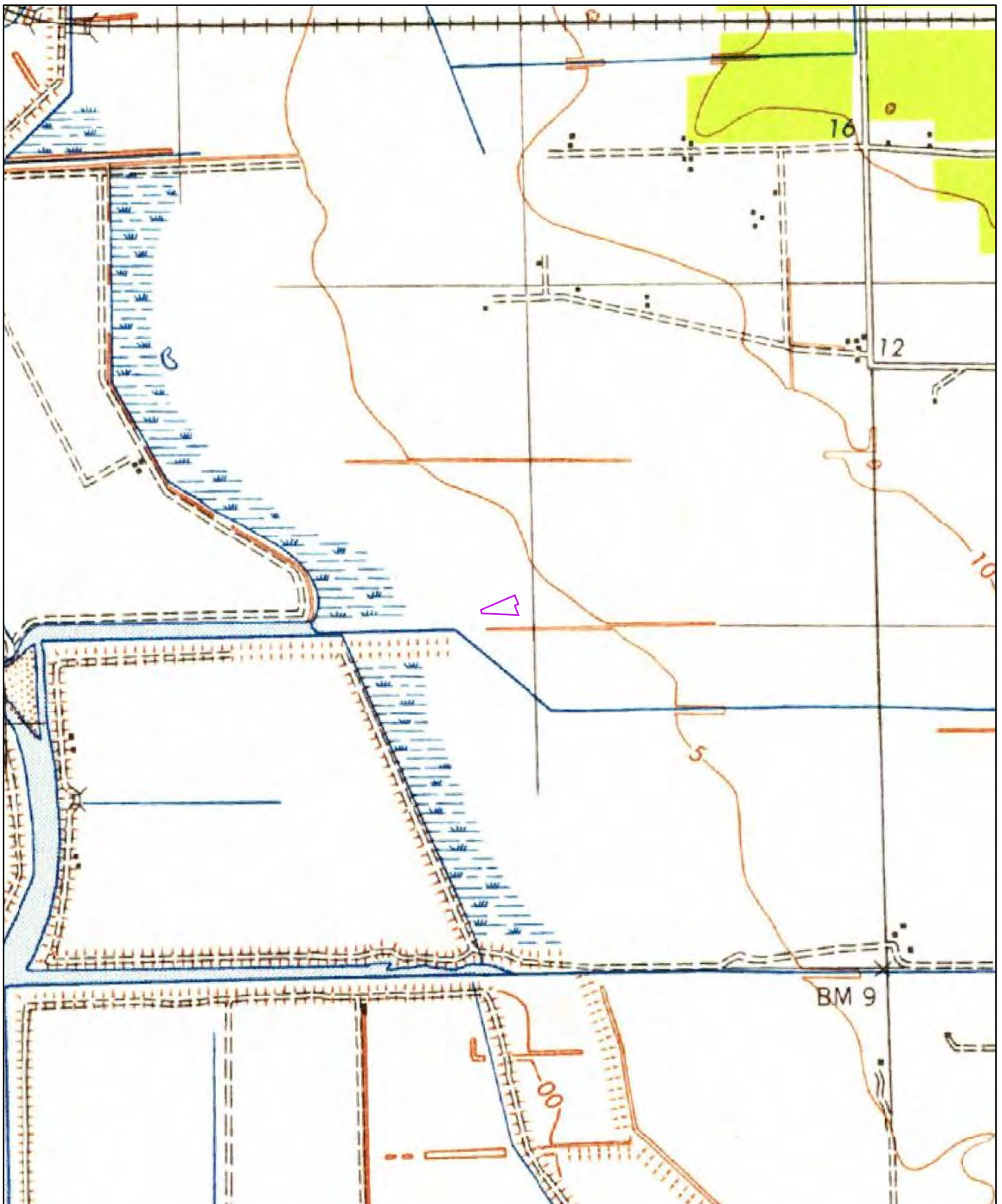
0 0.2 0.4 0.8 Miles

Order No. 20200211204

Quadrangle(s): Lodi, CA

Source: USGS 15 Minute Topographic Map





1939

0 0.2 0.4 0.8 Miles

Order No. 20200211204

Quadrangle(s): Lodi, CA

Source: USGS 15 Minute Topographic Map

APPENDIX E

Fire Insurance Map Report



FIRE INSURANCE MAPS

Project Property: NCPA Phase I
NCPA LEC Site
Lodi CA 95242

Project No: SAC278

Requested By: Geosyntec Consultants

Order No: 20200211204

Date Completed: February 12, 2020

Please note that no information was found for your site or adjacent properties.

APPENDIX F
City Directory Report

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



CITY DIRECTORY

Project Property: *NCPA Phase I
NCPA LEC Site
Lodi, CA 95242*

Project No: *SAC278*

Requested By: *Geosyntec Consultants*

Order No: *20200211204*

Date Completed: *February 14, 2020*

February 14, 2020
RE: CITY DIRECTORY RESEARCH
NCPA Phase I
NCPA LEC Site Lodi, CA

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:

12700-12755 of Thornton Road
All of North Cord Road

Search Results Summary

Date	Source	Comment
2018	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2006	HAINES	
2000	HAINES	
1995	HAINES	
1990	HAINES	
1983	POLKS	
1979	POLKS	
1975	POLKS	
1966	POLKS	
1957	POLKS	
1949-50	POLKS	
1945-46	POLKS	
1941	POLKS	
1936	POLKS	
1930	POLKS	

Environmental Risk Information Services

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1.866.517.5204 | info@erisinfo.com | erisinfo.com

NO LISTING FOUND FOR THIS YEAR...

12745 NORTHERN CALIFORNIA POWER AGCY...Elect
12745 STIG...Other Management Consulting Ser
12751 WHITE SLOUGH WATER POLUTION...Federal
12751 WHITE SLOUGH WATER POLUTION...Governme

NO LISTING FOUND FOR THIS YEAR...

12745 ARB INC...Construction Management
12745 SIEMENS ENERGY INC...Energy Management

STREET NOT LISTED

FARMERS INC
12751 ★ LODI CTY WRKS 209-333-6740
WHT SLGH WSTWTR

2006

SOURCE: HAINES

THORNTON ROAD - B

★ NORTHERN
CALIFORNIA POWER
AGCY

209-333-6370

2000

SOURCE: HAINES

NORTH CORD ROAD

STREET NOT LISTED

2000

SOURCE: HAINES

THORNTON ROAD

1995

SOURCE: HAINES

NORTH CORD ROAD

12751 ★ LODI CTY WRKS 209-333-6749
WSTEWSTR TRTMNT
★ NORTHERN 209-333-6370
CALIFORNIA POWER
AGCY

STREET NOT LISTED

STREET NOT LISTED

12751	*LODI CTY WKS WATER	333-6749
13436	COSTA Louis	369-6119
	DIAZ Fausto	333-2240

STREET NOT LISTED

STREET NOT LISTED

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STREET NOT LISTED

APPENDIX G

User-Provided Documentation



12745 N. Thornton Road
Lodi, CA 95242

(209) 333-6370

www.ncpa.com

September 24, 2019

Ms. Mary Dyas
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento CA 95814

**Subject: Northern California Power Agency (NCPA)
Lodi Energy Center – LEC Storage Area Review**

Dear Ms. Dyas,

Please find attached California Energy Commission's (CEC) project change questionnaire requesting review on a proposed project to increase a storage area at the Northern California Power Agency's (NCPA) Lodi Energy Center (LEC).

Please do not hesitate to contact me at (209) 210-5009 if you need further information or have additional questions.

Sincerely,

Michael J. Fallon
NCPA – Lodi Energy Center

CALIFORNIA ENERGY COMMISSION

PROJECT CHANGE QUESTIONNAIRE



PROJECT:Permenent Project Laydown Area (NCPA – LEC)

AFC No.:Click or tap here to enter text.

CONTACT:Michael Fallon

DATE 9/24/19

1. Please describe the project change.

Northern California Power Agency (NCPA) is proposing to increase the stoage and construction laydown area at the Lodi Energy Center (LEC). The proposed area is a 2.6 acre triangular area directly west of the switch yard (see attached map). This area was approved and used during the construction phase of the CT-1 (LEC) in 2010 (Attached: Approval and Request of Additional Laydown Area dated July 2010). NCPA is requesting to make perment Laydown Area F of the attached document. This area would be used during maintenance and repair outages for paking, equipment storage and pre-assembly of parts.

2. Would the proposed project change cause a direct physical change or reasonably foreseeable indirect physical change to the site or equipment on site? If yes, please explain.

a. Is the proposed project change to software? ☐ Yes ☒ No

b. Is there a change to method of operation or how the facility is being operated

The physical change to the plant area would include minor grading and installation of gravel road base or aphalt, parimeter fencing, storage containers, and construction parking.

3. Please describe why the project change is needed (e.g., due to changes in regulation or operation and maintenance specifications, equipment or component failure)?

During system repair and maintenance outages when multiple contractors are onsite conducting activies their is a need for additional laydown, storage and parking. This will reduce vehicle congestion in the alley ways between plant and equipment resulting in inhanced safety, work efficiency, and cost savings.

4. Would the proposed project change require a change to existing conditions of certification? ☐ Yes ☒ No

If yes, please list the conditions of certification affected.

Click or tap here to enter text.

5. Would the proposed project change result in a temporary or permanent non-conformance with existing LORS? ☐ Yes ☒ No

If yes, please list the applicable LORS and describe the non-conformance

Click or tap here to enter text.

6. Would the proposed project change affect the project's design, operation, or performance requirements as described in the Final Commission Decision and any documents incorporated by reference (e.g. AFC, FSA, etc.)?

☐ Yes ☒ No

7. Is there a change to the project description as listed in the Final Commission Decision?

☒ Yes ☐ No

8. Would the proposed project change have any significant adverse environmental or public health and safety impacts?

☐ Yes ☒ No

If yes, how were the impacts determined and what mitigation measures are proposed?

Click or tap here to enter text.

9. Does the proposed project change affect the public, including nearby property owners and residents?

☐ Yes ☒ No

If yes, how?

Click or tap here to enter text.

10. Are there any additional permits from other agencies required and proposed timing?

☒ Yes ☐ No

11. What is the proposed timing/schedule for demolition, construction, and commissioning?

NCPA is proposing to have the 2.6 acre area ready of use by Spring 2020



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

0 150 300 600 Feet

N

FIGURE 1
LAYDOWN AREAS
 LODI ENERGY CENTER
 LODI, CALIFORNIA



CH2M HILL

2485 Natomas Park Drive

Suite 600

Sacramento, CA 95833-2937

Tel 916.920.0300

Fax 916.920.8463

July 2, 2010

Mr. Rod Jones
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Lodi Energy Center (08-AFC-10)
Amendment 1 - Request for Additional Laydown Areas

Dear Mr. Jones:

Attached please find one hard copy and one electronic copy of Northern California Power Agency's Amendment 1, Request for Additional Laydown Areas. If you have any questions about this matter, please contact me at (916) 286-0249 or Andrea Grenier at (916) 780-1171.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Sarah Madams".

Sarah Madams
AFC Project Manager

Attachment

cc: A. Grenier
E. Warner/NCPA

*Amendment 1
Request for Additional Laydown Areas*



LODI ENERGY CENTER

(08-AFC-10)

EY062008001SAC

July 2010

Submitted by



Submitted to

California Energy Commission

With Technical Assistance by

CH2MHILL

Request for Additional Laydown Areas

Amendment 1
for the
Lodi Energy Center
Lodi, California
(08-AFC-10C)

Submitted to the
California Energy Commission

June 2010

Prepared by



With Technical Assistance by

CH2MHILL
Sacramento, CA

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Description of Proposed Amendment.....	1-1
Necessity of Proposed Changes	1-1
Summary of Environmental Impacts.....	1-2
Consistency of Changes with License	1-2
2. Location for the Additional Laydown Area.....	2-1
Necessity of Proposed Changes	2-1
3. Environmental Analysis of the Additional Laydown Areas.....	3-1
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Appendix

A	Soil Impact Loss Calculations
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Figure

1	Project Laydown Areas
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SECTION 1

Introduction

Background

On April 21, 2010, the California Energy Commission (CEC) approved and licensed Northern California Power Agency's (NCPA) Lodi Energy Center (LEC). The LEC project is a nominal 296-megawatt (MW) combined-cycle power plant located in the City of Lodi. The LEC is proposed for a site parcel of approximately 4.4 acres adjacent to the City of Lodi's White Slough Water Pollution Control Facility (WPCF) to the east, treatment and holding ponds associated with the WPCF to the north, the existing 49-MW NCPA Combustion Turbine Project #2 (STIG plant¹) to the west, and the San Joaquin County Mosquito and Vector Control facility to the south. The project site is on land owned and incorporated by the City of Lodi, and is approximately 6 miles west of the Lodi city center. The city of Stockton is approximately 2 miles south.

The LEC will receive recycled water provided by the WPCF via a pipeline in the utility corridor connecting the LEC and the WPCF. Construction water will be supplied from the WPCF. The existing 230-kilovolt (kV) switchyard will be shared by the existing NCPA Combustion Turbine Project #2 (STIG) and LEC facilities. An additional high-voltage circuit breaker and other equipment will be added to the existing switchyard to accommodate the LEC. Natural gas for the project will be supplied from a new Pacific Gas and Electric (PG&E) 2.7-mile-long natural gas pipeline. Construction of the project will begin in the second quarter of 2010 and commercial operation is expected to commence in the second quarter of 2012.

Description of Proposed Amendment

The purpose of this filing is to request the CEC's approval to amend the LEC project description to include an additional 9.4 acres of laydown area adjacent to the LEC site. As shown in Figure 1, this additional area includes a 2.6-acre triangular piece along the western border of the switchyard (referred to as Area F), a 6.1-acre area near the Frontage Road adjacent to I-5 (referred to as Area E), and the extension of Area A to the north, an increase from 3.1 acres to 3.8 acres. The construction laydown and parking areas approved in the CEC Final Decision, totaled 9.8 acres. The additional 9.4-acre areas proposed for laydown increases the total construction laydown and parking area to 19.2 acres. More detailed information on these proposed changes is provided in Section 2.

Necessity of Proposed Changes

Sections 1769 (a)(1)(A), (B), and (C) of the CEC Siting Regulations require a discussion of the necessity for the proposed revisions to the LEC project and whether the revisions are based on information known by the petitioner during the certification proceeding. These proposed

¹ "STIG plant" refers to the NCPA Combustion Turbine Project, which is a steam turbine injected gas turbine (STIG) plant

changes were not known by the Applicant until after certification and are necessary to facilitate construction and reduce costs associated with construction of the new transmission facilities; described in further detail in Section 2.

Summary of Environmental Impacts

Section 1769 (a)(1)(E) of the CEC Siting Regulations requires that an analysis be conducted to address impacts the proposed revisions may have on the environment and proposed measures to mitigate significant adverse impacts. Section 1769 (a)(1)(F) requires a discussion of the impacts of proposed revisions on the facility's ability to comply with applicable laws, ordinances, regulations, and standards (LORS). Section 3 discusses the potential impacts of the proposed changes on the environment, as well as the proposed revisions' consistency with LORS.

Consistency of Changes with License

Section 1769 (a)(1)(D) of the CEC Siting Regulations requires a discussion of the consistency of each proposed project revision with the assumptions, rationale, findings, or other bases of the Final Decision and whether the revision is based on new information that changes or undermines the bases of the final decision. Also required is an explanation of why the changes should be permitted. As set forth in the following sections, the proposed revisions do not undermine the assumptions, rationale, findings, or other basis of the Final Decision for the project.

SECTION 2

Location for the Additional Laydown Area

Figure 1 shows the additional locations for the laydown areas to be used for supplementary staging of equipment (Figure 1 is provided at the end of the document). The additional laydown areas total approximately 9.4 acres. These additional areas will include a triangular piece along the western border of the switchyard (referred to as Area F), an area near the entry to the site on the Frontage Road adjacent to Interstate 5 (I-5) (referred to as Area E), and the extension of Area A to the north. The additional Laydown Areas E and F historically have been disturbed by agricultural activities. Laydown Area A previously has been disturbed during construction and operation of the WPCF.

Necessity of Proposed Changes

Sections 1769 (a)(1)(B) and 1769(a)(1)(C) of the CEC Siting Regulations require a discussion of the necessity for the proposed changes to the project and whether this modification is based on information that was known by the petitioner during the certification proceeding.

The need for additional laydown areas was not known to NCPA during the LEC licensing process. It was only discovered during the recently completed public bidding process that occurred after the certification, in that all of the construction contractors indicated in their bids that additional laydown area would be needed to complete construction of the LEC in a cost-effective manner. In addition, the City of Lodi has indicated that some of the original laydown areas allocated to the LEC project need to be reserved for its own projects. As a result, NCPA is requesting CEC approval of the additional laydown areas identified in this document.

SECTION 3

Environmental Analysis of the Additional Laydown Areas

The additional laydown areas provide the LEC project with additional staging areas during project construction. An analysis of each of the environmental areas included in the Application for Certification (AFC) is presented below. Additionally, the applicable LORS contained in the AFC have been reviewed to confirm consistency with applicable LORS.

3.1 Subject Matter Unaffected by the Additional Laydown Areas

Most of the subjects considered have no potential to be affected by the additional laydown areas. These unaffected subjects include Air Quality; Geologic Resources and Hazards; Hazardous Materials Management; Land Use; Noise and Vibration; Public Health; Socioeconomics; Traffic and Transportation; Visual Resources; Waste Management; and Worker Safety and Fire Protection.

3.2 Biological Resources

The additional laydown areas will temporarily affect approximately 9.4 acres of disturbed land adjacent to the boundary of the project site, and within areas previously disturbed during construction and operation of the present WPCF, and historically disturbed by ongoing agricultural activities. Surveys for wildlife usage, wetlands, nesting avian species and rare plants of the additional laydown areas were conducted on February 15, April 13, and June 16, 2010, by CH2M HILL biologists Rick Crowe, Dan Williams, and Russell Huddleston. As shown in Figure 1, the additional laydown areas will not be within the buffer zone previously analyzed in the AFC. No additional LORS will be triggered as a result of the temporarily impacted additional laydown areas. Therefore, any potential biological resource impacts associated with the proposed change in the size and location of the laydown areas will be less than significant after mitigation discussions with the San Joaquin County Council of Governments (SJCCOG), which implements the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (MSHCP).

Biological Setting

Laydown Area A

The CEC Final Decision approved Laydown Area A as 3.1 acres. NCPA is requesting that this area be expanded by 0.7 acres, thereby increasing total temporary impacts for Laydown Area A to 3.8 acres. The additional impacts are to the same open ruderal grassland as originally described in the AFC. Generally, Laydown Area A is a ruderal grassland consisting of dense rip-gut brome (*Bromus diandrus*), yellow-star thistle (*Centaurea solstitialis*), wild radish (*Raphanus sativa*), black mustard (*Brassica nigra*), and fiddleneck (*Amsinckia menziesii*). A few small valley oaks (*Quercus lobata*) are present at the north end of the expanded laydown area. No trees would be removed from this area.

Additionally, this ruderal grassland is routinely mowed as part of WPCF facility maintenance and fire protection practices. The area will be restored to pre-disturbance conditions following the completion of construction activities.

Laydown Area E

Laydown Area E is located directly north of the Frontage Road entrance to the LEC project site and the existing WPCF and STIG facilities near I-5. This 6.1-acre site is characterized by very dense ruderal vegetation including foxtail barley (*Hordeum murinum*), Italian ryegrass (*Lolium multiflorum*), rip-gut brome (*Bromus diandrus*), wild oats (*Avena barbata*, *A. Fatua*), soft chess (*Bromus hordeaceus*), wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), and fiddleneck (*Amensinckia menziesii*). There is a small agricultural drainage adjacent to the northern most portion of Laydown Area E; however, it is dominated by the same vegetation as the laydown area and is devoid of wetland vegetation. Wildlife observed during the February through June surveys consisted of California ground squirrels (*Spermophilus beecheyi*) and burrows along the northern edge of the site and around the perimeter of the proposed laydown area. Additionally, red-tail hawks (*Buteo jamaicensis*), Swainson's hawks (*Buteo swainsonii*), and a white-tailed kite (*Elanus leucurus*) were observed foraging and flying over the proposed laydown area along with typical grassland species. Red-winged blackbird (*Agelaius phoeniceus*), rock dove (*Columba livia*), Savannah sparrow (*Passerculus sandwichensis*), and Brewer's blackbird (*Euphagus cyanocephalus*) were observed flying over or foraging in this area. Laydown Area E is devoid of trees and therefore provides limited nesting structures for avian species. This ruderal agricultural area is routinely disked for fire suppression and cultivation. The area will be restored to pre-disturbance conditions following the completion of construction activities.

Laydown Area F

Laydown Area F is a 2.6-acre triangular area directly west of the existing STIG switchyard and STIG plant. This site is characterized by a lush growth of ruderal grassland, including milk thistle (*Silybum maritimum*); Italian thistle (*Carduus pycnocephalus*); perennial pepperweed (*Lepidium latifolium*); and other common ruderal grasses and forbs including rip-gut brome, soft chess, Italian rye grass, and black mustard. Laydown Area F is devoid of trees and therefore provides limited nesting structures for avian species. Wildlife observed in the vicinity of the laydown area included black phoebe (*Sayornis nigricans*), northern harrier (*Circus cyaneus*), belted kingfisher (*Ceryle alcyon*), killdeer (*Charadrius vociferus*), and ground squirrels with burrows. Coyote (*Canis latrans*) scat also was observed. This ruderal agricultural area is routinely disked or mowed for fire suppression. Laydown Area F is located just north of the giant garter snake upland habitat as identified in the Variance Request for Giant Garter Snake Upland Habitat (CH2M HILL, 2009), but it will not encroach on the 200-foot-buffer area approved in the CEC Final Decision. The upland setback area will be silt fenced to delineate the extent of disturbance and keep construction personnel and equipment out of the area. Laydown Area F will be restored to pre-disturbance conditions following the completion of construction activities.

Mitigation

Based on discussions with Mr. Steve Mayo, Senior Habitat Planner with SJCOG, mitigation is required for the loss of agricultural land from the use of Laydown Area F (2.6-acres) and

the additional acreage requested for Laydown Area A (0.7-acres). Mr. Mayo stated that mitigation for the Laydown Area E (6.1-acres) is not required because this parcel falls into Category A Exempt (No pay zone) based on the City of Lodi Compensation Map that was developed for parcels in the Lodi area by SJCOG. Therefore, the estimated mitigation costs for the temporary loss of agricultural land based on the 2010 SJCOG habitat fee structure is \$48,229.50. These monies will mitigate for the loss of 3.3-acres of agricultural land at \$14,615.00 an acre. This mitigation agreement will be entered into by submitting an application request to SJCOG.

3.3 Cultural Resources

The additional laydown areas are located adjacent to the LEC site, in areas previously disturbed during construction and operation of the present WPCF and historically disturbed by agricultural activities.

A literature search of the area, including a 1-mile radius surrounding the LEC site was conducted during preparation of the AFC. The additional laydown areas fall within this 1-mile radius. No resources have been previously documented within the additional laydown areas. CH2M HILL conducted an intensive pedestrian field survey of the revised laydown areas on May 18, 2010. The additional laydown areas are heavily disturbed and visibility was 100 percent. No cultural resources were observed as a result of the pedestrian field survey of the revised laydown areas. There are no known cultural resources in the revised laydown areas that are eligible for listing in the National Register of Historic Places or the California Register of Historic Resources.

The revised laydown areas will not result in potential impacts greater than those analyzed in the AFC, and no LORS will change as a result of the revised laydown areas. Therefore, any potential cultural resources impacts associated with the proposed change in the size and location of the laydown areas will be less than significant.

3.4 Paleontology

The additional laydown areas are adjacent to the boundary of the project site, in areas previously disturbed during construction and operation of the present WPCF and historically disturbed by agricultural activities. Because the revised laydown area has been subjected to previous ground disturbance activities and no new excavations are anticipated at the laydown areas the additional laydown areas will not result in potential impacts greater than those analyzed in the AFC and will comply with applicable LORS. Because mitigation measures proposed in the AFC will be employed, any potential paleontological resource impacts will be less than significant given application of those mitigation measures.

3.5 Soils

Soil classification of the additional laydown areas were provided in the AFC. Soil loss by water erosion during construction has been estimated for the additional laydown areas, using the Revised Universal Soil Loss Equation (RUSLE2). Results and detailed calculations are provided in Appendix A.

With the implementation of appropriate best management practices (BMPs) that will be implemented under the Construction Stormwater Pollution Prevention Plan (SWPPP), the total projected soil loss with the additional laydown areas increases from 0.20 tons to 0.21 ton and is considered to be a minimal amount and would not constitute a significant impact. The estimate of accelerated soil loss by water is very conservative (overestimate of soil loss) because it assumes only a single BMP (i.e., silt fencing), whereas the SWPPP will require multiple soil erosion control measures.

3.5.1 Wind Erosion

Potential fugitive dust resulting from the wind erosion of exposed soil was calculated for the additional laydown area using the emission factor in AP-42 (U.S. Environmental Protection Agency [EPA], 1995; also in Table 11.9-4 of Bay Area Air Quality Management District [BAAQMD], 2005).

Appendix A summarizes the mitigated total suspended particulates (TSP) predicted to be emitted from the site from grading and the wind erosion of exposed soil. Without mitigation, the maximum predicted erosion of material from the site and laydown areas has increased from 2.18 tons to an estimated 2.43 tons over the course of the project construction cycle. This estimate of 2.43 tons would be reduced with mitigation measures, from 0.79 ton (as presented in the AFC) to approximately 0.89 ton (with the additional laydown areas) by implementing basic mitigation measures, such as water application. These estimates are conservative because they make use of emission rates for a generalized soil rather than for site-specific soil properties.

With implementation of the appropriate BMPs that will be required for this project, the additional potential soil impacts are less than significant. Revision of the laydown area will be consistent with applicable LORS, and any potential soil impacts will be less than significant.

3.6 Water Resources

Use of the additional laydown areas will require additional water for dust suppression on the 9.4 acres of additional laydown area. However, water for dust suppression for the laydown area will be minimal and is not anticipated to create impacts on either groundwater or stormwater. NCPA will use water from the WPCF for dust suppression activities during laydown area use. All of these uses are temporary and construction related. Use of the additional laydown areas will not result in potential impacts greater than those analyzed in the AFC and will comply with applicable LORS. As a result, any potential water resource impacts will be less than significant.

SECTION 4

Potential Effects on the Public and Property Owners

The proposed change described in this amendment will have no effect on the public and property owners beyond what was originally approved by the CEC².

The additional laydown areas are temporary and minimal and will result in no greater impacts on the public and property owners than those analyzed during project licensing. Therefore, impacts on the public and property owners are expected to be the same than those analyzed during the license proceeding for the project.

² CEC Siting Regulations Section 1769(a)(1)(G) and (I)

SECTION 5

List of Property Owners

The list of property owners within 1,000 feet of the proposed project provided in the AFC has not changed as a result of the additional laydown areas. Therefore, the list of property owners within 1,000 feet of the proposed project is incorporated by reference from the AFC.³

³ CEC Siting Regulations Section 1769(a)(1)(H).

Figure



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

0 150 300 600 Feet

N

FIGURE 1
LAYDOWN AREAS
 LODI ENERGY CENTER
 LODI, CALIFORNIA

Appendix A

Soil Impact Loss Calculations

Table 5.11-3. Estimate of Soil Loss by Water Erosion Using Revised Universal Soil Loss Equation (RUSLE2)

Feature (acreage) ²	Activity	Duration (months)	Estimates Using Revised Universal Soil Loss Equation ¹		
			Soil Loss (tons) without BMPs	Soil Loss (tons) with BMPs	Soil Loss (tons/yr) No Project
Site (4.4 acres)	Grading	2	0.8	0.010	0.0233
	Construction	22	4.1	0.113	---
Laydown Areas (A through F - 18.5 acres) (0 acres exposed; either paved or gravelled)	Grading	1	1.7	0.022	0.0981
	Construction	23	0.0	0.000	---
Gas Supply Pipeline (1.30 acre trench; 9.73 acre construction corridor)	Grading	3	2.67	0.0340	0.0515
	Construction	3	1.24	0.0340	---
Transmission Line Pole (0.0004 acre for pole footprint)	Grading	0	0.00	0.00	0.0000
	Construction	0	0.00	0.00	---
Project Soil Loss Estimates	All activities listed above	20	10.53	0.213	0.173

Notes:

- Soil losses (tons/acre/year) are estimated using RUSLE2 software available online [http://fargo.nserl.purdue.edu/rusle2_dataweb/].
 - The soil characteristics were estimated using RUSLE2 soil profiles corresponding to the mapped soil unit.
 - Soil loss (R-factors) were estimated using 2-year, 6-hour point precipitation frequency amount for the LEC Project site found at [<http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>].
 - Estimates of actual soil losses use the RUSLE2 soil loss times the duration and the affected area. The No Project Alternative estimate does not have a specific duration so loss is given as tons/year.

Other Project Assumptions as follows:

- It is assumed that 100% of the LEC site and laydown areas will be exposed during grading, and approximately 10% of the site will be bare soil during construction.
- It is assumed that grading the site will take 2 months and construction will take 22 months.
- It is assumed that grading for laydown areas will take 1 month and that the area will be covered (gravelled or paved) immediately thereafter.
- It is assumed that soil loss will be negligible from the laydown areas once it is covered.
- It is assumed that the 14,122-foot gas pipeline will be installed within a 4-ft wide trench and a 30-ft construction corridor along existing roadways.
- It is assumed that the gas pipeline will take 3 months to construct and will take another 3 months before permanent cover is established.
- The water and sewer lines will be completed on-site, so no additional soil losses are estimated for them.
- It is assumed that no new off-site transmission poles are required.

RUSLE2 Assumptions as follows:

100-ft slope length. Estimated soil unit slope is the midpoint of the minimum and maximum of the unit slope class.

Construction soil losses assume the following inputs: Management - Bare ground; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Grading soil losses assume the following inputs: Management - Bare ground/rough surface; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Construction with BMP soil losses assume the following inputs: Management - Silt fence; Contouring - Perfect, no row grade; Diversion/terracing - None; Strips and Barriers - 2 fences, 1 at end of RUSLE slope.

No Project soil losses assume the following inputs: Management - Dense grass, not harvested; Contouring - None, rows up and down hill; Diversion/terracing - None; Strips and Barriers - None.

Table 5.11-4. Estimate of Total Suspended Particulates (TSP) Emitted from Grading and Wind Erosion

Emission Source	Acreage	Duration (months)	Unmitigated TSP (tons)	Mitigated TSP (tons)
Grading Dust:				
Project Site	4.40	2	0.151	0.053
Laydown Areas (A through F)	18.50	1	0.204	0.111
Gas Supply Pipeline	1.30	3	0.536	0.188
Transmission Line Pole Holes	0.000	0.00	0.000	0.000
Wind Blown Dust:				
Project Site	4.40	22	0.307	0.107
Laydown Areas (A through F)	0.00	23	0.000	0.000
Gas Supply Pipeline	9.73	3	1.230	0.431
Transmission Line Pole Holes	0.000	0	0.0000	0.0000
Estimated Total			2.428	0.890

Notes:

All linear feature impacts noted above are for portions outside of the project areas footprints.

Project Assumptions:

Grading for project site will be completed in a 2 month period and construction will extend an additional 18 months.

Grading for laydown areas will be completed in a 1 month period and the site will be covered (gravelled or paved) immediately.

No new excavation for transmission line pole will be required

Approximately 1/10th of the project site has bare soil exposure during the length of the construction period.

Water and sewer line connections will be on site.

The gas supply line will be 14,122 feet long and installed primarily along roadway rights-of-way in a 4-ft trench with 30-ft construction corridor.

Data Sources:

^a PM10 Emission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, Level 2 Analysis Procedure, March 1996

^b PM10 to TSP Conversion Factor Source: Bay Area Air Quality Management District CEQA Guidelines, Assessing the Air Quality Impacts of Projects, December 1999.

SCAQMD CEQA Handbook (1993) Table 11-4 for mitigation efficiency rates (as summarized in Table 8.9-4)

Soil Type	Acreage		Soil Loss Estimates Using RUSLE2 software (tons/ac/year)			
Site		Slope	Grading	Construction w/o BMPs	Construction with BMPs	No Project
Site	4.40	1.0	1.1	0.51	0.014	0.0053
subtotal			4.84	2.24	0.06	0.0233
Laydown Areas (A through F)	18.50	1.0	1.1	0.51	0.014	0.0053
subtotal			20.35	9.44	0.259	0.0981
Gas Supply Pipeline	9.73	1.0	1.1	0.51	0.014	0.0053
subtotal			10.70	4.96	0.136	0.0515
Transmission Line Pole	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00
Process Water Line	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00
Sewer Line	0.00	1.0	1.1	0.51	0.014	0.0053
subtotal			0.00	0.00	0.00	0.00

Assumptions:

Assumes slope is the mid-point of the slope class

100% of project site would be bare soil during grading.

100% of pole holes will be bare soil during grading/excavation.

The No Project soil loss assumes a 'dense grass, not harvested' management scenario.

Project: LEC Lodi Project
Dust from Wind Erosion - With and Without Mitigation

Grading		MRI factor of 0.011 tons/acre/month is based on 168 hours per month of construction activity.
PM10 Emission Factor (ton/acre/month) ^a	0.011	Fact Sheet, 4/26/2007.
Project Site		
Duration (months):	2	Assumes 2 months of active grading.
Site Acreage:	4.40	Assumes 100% of site is graded
PM10 Emitted (tons):	0.10	
TSP Emitted (tons) ^b :	0.151	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.053	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Laydown Areas (A through F)		
Duration (months):	1	Assumes one month to grade
Site Acreage:	18.50	Sum of Laydown areas A, B, C, D, E and F
PM10 Emitted (tons):	0.20	
TSP Emitted (tons) ^b :	0.318	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.111	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Gas Supply Line Trench		
Duration (months):	3.0	Assumes 3 months to construct pipeline
Site Acreage:	1.297	Assumes a 4-ft wide trench
PM10 Emitted (tons):	0.0428	
TSP Emitted (tons) ^b :	0.0669	assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.0234	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Hole		
Duration (months):	0.00	Assumes no transmission lines poles needed to connect
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Process Water Line Trench		
Duration (months):	0.0	Assumes on-site construction
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sewer Line Trench		
Duration (months):	0.0	Assumes on-site construction
Site Acreage:	0.000	
PM10 Emitted (tons):	0.000	
TSP Emitted (tons) ^b :	0.000	Assume TSP is 64% PM10
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total Unmitigated TSP Emitted (tons)	0.536	
Total Mitigated TSP Emitted (tons)	0.188	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

^aEmission Factor Source: Midwest Research Institute, South Coast AQMD Project No. 95040, March 1996, Level 2 Analysis Procedure

^b Conversion Factor Source: Bay Area Air Quality Management District (BAAQMD) BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans. December 1999

Wind Blown Dust		
TSP Emission Factor (ton/acre/year)	0.38	Emission Factor Source: AP-42, Section 11.9 Western Surface Coal Mining Table 11.9-4, January 1995.
Project Site		
Acres exposed	4.40	
Duration (months)	22	Assumes 22 months of construction for Project site area after grading
TSP Emitted for Site (tons):	0.307	Assumes 1/10th of the site is bare soil during 18 month construction period
Mitigated TSP Emitted (tons):	0.107	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Laydown Areas (A through F)		
Acres exposed	0.000	Sum of 6 laydown areas is 18.5 acres but all these areas are covered with gravel or other material after grading
Duration (months)	23	Assume 24 months for construction period (minus 1 month for grading)
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Gas Supply Line Corridor		
Acres exposed	9.726	Assumes 14,121.6-ft pipeline to east of site and construction corridor is 30 feet along side of road
Duration (months)	3	Assumes 3 months after excavating trench that permanent cover (i.e., paving) is established
TSP Emitted for Site (tons):	0.924	
Mitigated TSP Emitted (tons):	0.323	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Transmission Line Pole Footprint		
Acres exposed	0.000	Assumes no new poles are needed to connect to existing T-line
Duration (months)	0.0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Process Water Line Corridor		
Acres exposed	0.000	Assumes on-site construction
Duration (months)	0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Sewer Line Corridor		
Acres exposed	0.000	Assumes on-site construction
Duration (months)	0	
TSP Emitted for Site (tons):	0.000	
Mitigated TSP Emitted (tons):	0.000	Assume 65% reduction in TSP with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4
Total (tons) without mitigation	1.230	
Total (tons) with mitigation	0.431	Assume 65% reduction in PM10 with watering thrice daily per SCAQMD CEQA Handbook (1993) Table 11-4

Project: LEC- Steve Long input for areas on 5/30/08 - last revision on June 17, 2010

OBJECTID	AREAS	SYMBOL	Portion	Area or Length	Acres	Acreage_tot
LEC Site	149- Devries SL		100.0%		3.79	4.40 From Sarah Madams email dated 7/10/08
						0.44 Assumes only 10% of site is bare soil during construction
Laydown Area A	149- Devries SL		100.0%		3.10	3.10 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2010
Laydown Area B	149- Devries SL		100.0%		2.20	2.20 From Mike Haskell email dated 5/5/08
Laydown Area C	149- Devries SL		100.0%		1.60	1.60 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2010
Laydown Area D	149- Devries SL		100.0%		2.90	2.90 From Mike Haskell email dated 5/5/08; revised by Megan Sebra 6/16/2011
Laydown Area E	149- Devries SL		100.0%		6.10	6.10 New laydown area provided by Megan Sebra 6/16/2012
Laydown Area F	149- Devries SL		100.0%		2.60	2.60 New laydown area provided by Megan Sebra 6/16/2013
						Assumes laydown areas are completely covered (paved or gravelled) during construction.
						18.50 Revised by email from Megan Sebra June 16, 2010
Natural gas supply pipeline -trench	149- Devries SL		100.0%	14121.6	1.297	Edit from 2.5 miles based on email revision from M. Sebra on 2/6/2009. Assumes 4 foot wide trench
Natural gas supply pipeline-corridor	149- Devries SL		100.0%	14121.6	9.726	Edit from 2.5 miles based on email revision from M. Sebra on 2/6/2009. Assumes 4 foot wide trench
						11.02
						Sum 29.962 Assumed 100% exposed during construction
						Construction
						Corridor
Transmission Line Pole	149- Devries SL			0	0.0000	0.0000 Assumes no 4x4 ft holes are needed off site to connect to existing OH lines
0	sum		0	0	0.0000	0.0000
						0.0000 Assumed pole hole footprint will be unprotected until pole installed
						Construction
						Trench acres
						Corridor acres
Process water supply pipeline	-		0		0	0 Assumes on-site connection
Sewer Line	-		0		0	0 Assumes on-site connection

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Subject **Lodi Energy Center (LEC) Biological Resource Assessment, New Storage Area Project, San Joaquin County, California**

Attention Michael Fallon, Compliance Manager and Environmental Health and Safety
Northern California Power Agency, Lodi Energy Center

From Steve Long and Rick Crowe, Jacobs Engineering Group Inc. (Jacobs)

Date February 11, 2020

1. Introduction

The Northern California Power Agency, Lodi Energy Center (NCPA-LEC) is proposing to use former, temporary laydown area as a permanent storage area. The proposed permanent storage area is located on the western side of the existing NCPA-LEC site in San Joaquin County, California (Attachment 1, Figure 1). The proposed storage area was previously identified as a temporary Laydown Area F during the permitting phase for the NCPA-LEC. The laydown area was mitigated for temporary impacts but it was not utilized during LEC construction. The area is currently being used by the city of Lodi for storage of concrete conveyance materials (pipe segments and vaults).

This technical memorandum documents the results of a review of existing published biological literature available online and documents related to biological resources from licensing the power plant facility. The memorandum also summarizes the results of a biological reconnaissance survey performed on December 19, 2019 within the area proposed for the permanent storage. In addition, the memorandum provides an assessment of potential impacts to biological resources associated with the project and recommends best management practices for avoiding impacts to biological resources.

Attachments to this technical memorandum include:

- Attachment 1 – Figures
- Attachment 2 – Special-Status Species and Biological Resources Summary Tables
- Attachment 3 – Photographs

2. Project Description

The NCPA-LEC is proposing to create a permanent storage area on the west side of their current plant facilities. The project site is located within the U.S. Geological Survey (USGS) 7.5-minute Terminous quadrangle in Sections 23 and 24, Township 03 North, Range 05 East, Mount Diablo Meridian.

The proposed permanent storage area is bounded on the north by an irrigated agricultural field and the southwest corner of the City of Lodi WWTF ponds. The eastern boundary of the proposed storage area is comprised of an electrical switchyard and the northwestern corner of the NCPA-LEC property. The southern boundary of the proposed storage area lies about 200 feet to the north of an irrigation canal that drains west into White Slough (Attachment 1, Figure 4).

Construction vehicles for the permanent storage area would access the site from the northwest corner of the NCPA-LEC site. The storage site is nearly level but limited grading would be used to create level placement areas and internal access roadways for Conex containers and open storage areas that would be used for secure storage of materials to be used for operations and maintenance of the NCPA-LEC. The existing paved access route connecting from the northwest corner of the NCPA-LEC site would be linked to newly created internal roadways that would be compacted and covered with gravel to allow for year-round use.

At completion, the approximate 2.323-acre storage area would be protected with a permanent fence around the perimeter.

3. Methods

CH2M HILL Engineers, Inc., now Jacobs Engineering Group Inc. (Jacobs), conducted a review of publicly available data pertaining to special-status species, including federal- and state-listed (endangered, threatened, candidate, or proposed) species, Migratory Bird Treaty Act (MBTA) species, and California species of special concern. This review also included a query for designated or proposed critical habitat for federally listed species. To assess existing biological conditions and project permit requirements, the following activities were conducted:

- Review of USGS topographic maps, National Hydrography Dataset (USGS, 2020), and U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (USFWS, 2020a) maps in the vicinity for assessing presence of mapped aquatic resources (Attachment 1, Figure 2)
- Review of publicly available data sets for identifying the potential presence of sensitive biological resources, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW, 2019) within 2 miles of the proposed project (Attachment 1, Figure 2) and the USFWS Information, Planning, and Consultation system (USFWS, 2020b), for the survey area.
- Review also included previous environmental documents associated with construction permitting for the NCPA-LEC.
- Site visit and biological reconnaissance survey on December 19, 2019

Jacobs biologists Steve Long and Rick Crowe conducted a reconnaissance-level assessment of the proposed permanent storage area and adjacent areas to the south on December 19, 2019, to identify sensitive biological resources including regulated aquatic resources and potential habitat for special-status species.

Potential aquatic resources were assessed in proximity to the nearest anticipated construction activities and access route. An east-west oriented drainage ditch occurs approximately 180 feet south from the proposed storage area, north of the irrigation canal. Bank geometry and dominant vegetation characteristics at an observation point within the drainage ditch channel were noted at approximately 440 feet west of the existing access roadway crossing (see Attachment 1, Figure 4).

Potential habitat for special status species (especially giant garter snake [*Thamnophis gigas*]) was assessed by looking for evidence of burrows or other areas that could serve as hibernacula. Evidence of bird-nesting activity and sites within or adjacent to the storage area was also sought during the December site visit; however, the timing of this visit after the nesting season was not ideal for this activity.

Representative site photographs were taken and are included in Attachment 3.

4. Landscape Setting and Existing Conditions

The proposed project is located within the Sodic Claypan Terraces subsection (262Aj) of the Great Valley ecological subregion (Miles and Goudey, 1997). This subsection contains nearly level to gently sloping

alluvial fans from the southern end of the northern California Coast ranges. Streams in this subsection drain to the Sacramento River through man-made and natural channels.

The proposed project is within the Lower Mokelumne River hydrologic unit (Hydrologic Unit Code 1804001211). In the project area, drainage flows generally westward through man-made canals associated with irrigated agricultural areas that occur to the north, west, and south of the proposed storage area. The largest of these drainage features is an irrigation canal that flows from east to west to the south of the NCPA-LEC property and connects with the natural waterway, White Slough, approximately 1.5 miles west of the southwest corner of the NCPA-LEC property, near the transition to the Delta ecological subsection.

5. Results

The document review identified state- and federal-listed species with some potential to occur within or adjacent to the project area (Attachments 2a and 2b). Attachment 2a provides a list of the CNDDDB occurrences within 2 miles of the Proposed Storage Area and access route. Attachment 2b provides a list of Federally protected species and Critical Habitats associated with the project area. Site photographs are included in Attachment 3.

National Wetlands Inventory (USFWS, 2020a) and National Hydrography Dataset (USGS, 2020) identified a number of man-made irrigation/drainage features within the survey area. The largest of these features is the east-west flowing irrigation canal to the south of the NCPA-LEC site. This irrigation ditch drains west about 1.5 miles and joins with the natural waterway, White Slough within the Sacramento-San Joaquin River Delta (Attachment 1, Figure 3).

Attachment 2a shows nine state-listed or sensitive species that have occurrences recorded in the CNDDDB within 2 miles of the project area and include: two reptiles: giant garter snake (*Thamnophis gigas*) and western pond turtle (*Emys marmorata*); one crustacean: vernal pool tadpole shrimp (*Lepidurus packardii*); two flowering plants: woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*) and Mason's lilaeopsis (*Lilaeopsis masonii*); and four bird species: Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), California black rail (*Laterallus jamaicensis coturniculus*), and song sparrow [Modesto population] (*Melospiza melodia*) (CDFW 2019).

Attachment 2b shows ten federally listed species that include: one mammal, riparian brush rabbit (*Sylvilagus bachmani riparius*); one reptile, giant garter snake; two amphibians: California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*); one fish: Delta smelt (*Hypomesus transpacificus*); two insects: San Bruno Elfin butterfly (*Callophrys mossii bayensis*) and Valley elderberry longhorn beetle (*Desmocerus californicus*); two crustaceans: vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp; and one flowering plant: large-flowered fiddleneck (*Amsinckia grandiflora*). Attachment 2a also lists 16 bird species that could occur in the project area at various times during the year and that would be protected under the Migratory Bird Treaty Act. In addition, the project area overlaps the designated federal Critical Habitat for Delta smelt (USFWS, 2020b).

The proposed storage area consists of graded, open space to the west of the NCPA-LEC switchyard. The area will be accessed during construction from the northwest corner of the NCPA-LEC property. Approximately 180 feet south of the southern boundary of the proposed storage area there is a drainage ditch with an unpaved access roadway along its southern side. The drainage ditch passes through a culverted crossing where an unpaved access roadway leads north in the direction of the proposed storage area. The proposed storage area (Attachment 1, Figure 4) is a minimum distance of 200 feet north of the southern irrigation canal to provide an avoidance buffer for giant garter snake habitat.

The eastern portion of the proposed storage area is currently being used for material storage (i.e., concrete pipe segments and vaults) whose source was not determined. There are large electrical transmission towers to the north and south of the proposed storage area and the associated overhead transmission lines that run in a roughly north-northwest/south-southeast alignment (see Attachment 1, Figures 1 and 4). The lowest part of the overhead transmission line sag occurs above the proposed storage area near the stored concrete pipe segments.

There was evidence of recent filling and grading along the northern margin of the proposed storage area. The area to the west of the north-south access roadway had a large area showing freshly emerging herbaceous plants that indicated that an earlier filling and grading likely occurred in those areas in addition to the recent grading. It was reported that this ruderal agricultural area is routinely disked or mowed for fire suppression. The original Laydown Area F (and the currently proposed storage area) are located just north and outside of the 200-foot buffer associated with giant garter snake upland habitat that was identified as part of the LEC permitting process (CH2M HILL, 2009).

The vegetation community in the proposed storage area is characterized by an annual grassland that is dominated by dense patches of invasive or naturalized plants that include milk thistle (*Silybum marianum*) in the easternmost portion and also scattered throughout the remaining portions of the area. Other dominant plants included red-stemmed filaree (*Erodium cicutarium*); soft chess (*Hordeum murinum*); wild rye (*Festuca perrenis*); Johnson grass (*Sorghum halepense*); mustard (*Brassica rapa*); yellow star-thistle (*Centaurea solstitialis*), and Italian thistle (*Carduus pycnocephalus*).

No tree or shrub species are present in the proposed storage area. There are larger trees found to the south and east of the NCPA-LEC property that were associated with the margins of the irrigation canal. There were patches of smaller shrubs (willows) within the drainage ditch. There was no evidence of seasonal ponding or vernal pools observed in proximity to the proposed storage area.

Wildlife observed using the proposed area and the immediate surroundings consisted of an American white pelican (*Pelecanus erythrorhynchos*) carcass, black phoebe (*Sayornis nigricans*) foraging, white-tailed kite (*Elanus leucurus*) foraging, great egret (*Ardea alba*) foraging, house sparrow (*Passer domesticus*) fly over, Canada goose (*Branta canadensis*) fly over, coyote (*Canis latrans*) scat, raccoon (*Procyon lotor*) scat, California meadow vole (*Microtus californicus*) ground disturbance and California ground squirrel (*Otospermophilus beecheyi*) burrows. There were several ground squirrel burrows observed within the proposed storage area and there were several small sink-hole like depressions that are believed to be ground squirrel burrows that were enlarged by water flowing through them. These larger holes could provide potential, short-term wildlife cover where they occur along the northeastern margin of the proposed storage area (i.e., just west of the NCPA-LEC switchyard). In addition, the presence of the concrete pipe segments provides potential shelter for wildlife within the proposed storage area.

Based on these observations, it was concluded that the proposed storage area did not have suitable habitat for any of the listed federal or state-listed species noted above. More suitable special-status species habitat does occur, however, along the areas approximately 180 to 230 feet south from the southern margin of the proposed storage area and in the more remote delta areas to the west. For example, Swainson's hawk nesting has been noted in the large native trees to southeast of the NCPA-LEC property and along the large canal to the west of the project area (Attachment 1, Figure 3). While the CNDDB mapping indicates giant garter snake habitat extending from the western edge of the proposed storage area, the closer potential habitat for that species is the southern irrigation canal that connects to White Slough. As previously mentioned, this is the reason the proposed storage area is located at least 200 feet north of the irrigation canal.

As part of construction permitting for the LEC project, wetland conditions were assessed for proposed project areas including Laydown Area F, which roughly corresponds to the proposed storage area location (CH2M HILL 2009. Technical Memorandum, Lodi Energy Center – Wetland Concerns. January 9). This memorandum identified the irrigation canal and man-made ponds in the project vicinity as wetlands or waters of the United States and also collected wetland criteria (vegetation, soil, and hydrology) at three data points along the drainage ditch along the south side of the proposed LEC and existing switchyard and concluded that all three of these locations were in non-wetlands. It should be noted that the lowest (downstream) location of these sample points, SP-02, was approximately 1,000 feet east (upstream) from the Observation Point made during the December 19, 2019 site visit.

The Observation Point shown on Attachment 1, Figure 4 was located within the drainage ditch just beyond the western edge of the proposed storage area. At this location, the ditch bank rises steeply about 6 feet from the ditch bottom to the existing unpaved roadway. The northern bank at this location

risers more gradually and is obscured by recent grading just outside of the ditch. The Ordinary High Water Mark (OHWM) at this location was indicated by a clear transition from wetland plants in the bottom to upland plants on the bank. The OHWM channel itself was approximately 17 feet wide and 1.5 feet deep at the Observation point.

The presence of dense shining flat-sedge (*Cyperus eragrostis*), a FACW (facultative wetland) plant at the Observation Point location likely indicates that the lower, western portion of the drainage ditch is inundated for considerable periods and may possibly satisfy criteria for wetland conditions. However, because this ditch is approximately 180 feet from the proposed storage area and would not be affected by proposed activities, a more detailed wetland investigation is not warranted. It should be noted however, that the drainage ditch area and portions of the open land to the north may be subjected to periodic, seasonal winter flooding from the Sacramento River delta areas from the west.

6. Recommendations/Mitigation

6.1 Special-Status Reptiles

Potentially suitable habitat is present for giant garter snake within the south irrigation canal which is 200 feet south of the proposed storage area. Because the proposed storage area is located 200 feet from the potential snake habitat within the irrigation canal, it is expected that the probability for this species to occur there is minimal, however standard giant garter snake measures will be followed.

- Construction activities, especially earth moving, should be scheduled during the giant garter snake active season (roughly April 15 to November 1) to avoid the possibility of inadvertently harming snakes while they are in underground winter retreats.
- Pre-construction surveys should be conducted immediately before construction startup by a qualified biologist.
- A Worker Environmental Awareness Training (WEAT) should be conducted for all construction workers. The WEAT will be given by the qualified biologist that is familiar with site conditions. The WEAT information will include the snake's protected status, identifying characteristics, and relevant avoidance measures specific to the proposed activities and local conditions. Participation in the WEAT will be documented with sign-in sheets. All new construction personnel will be required to review relevant WEAT materials before signing off on completion.
- Should any snakes be encountered in the area during construction, construction staff should notify the project biologist in order to develop an appropriate response. The biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current USFWS recovery permits pursuant to section 10(a)1(A) of the Endangered Species Act (ESA).
- The biologist shall be required to report any incidental take to the U.S. Fish and Wildlife Service immediately by telephone at (916) 414-6600 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.
- Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance. Vehicle speeds should be kept below 15 miles per hour on unpaved roadways in the project area, especially along the southern access roadway.
- After completion of construction activities, any temporary fill and construction debris shall be removed. Final site conditions should be documented with a photographic and written record.

6.2 Special-Status Bird Species

Potentially suitable nesting habitat is present for birds protected under MBTA. The following measures are recommended to avoid impacts to nesting migratory birds:

- If possible, schedule construction activities to occur outside of the nesting season (February 1 to September 15).
- If construction activities are scheduled to occur during the nesting season, then preconstruction nesting bird surveys should be conducted by a qualified biologist within 14 days of construction, covering a radius of 0.25 mile for Swainson's hawk, 250 feet for non-listed raptors, and 100 feet for non-listed passerines. Periodic nesting surveys or monitoring during construction may be required if nesting Swainson's hawks are found within 0.25 mile of the survey area to ensure that construction activities have no adverse effect.
- If active nests are identified during the preconstruction survey, then the biologist should evaluate whether existing screening buffers (such as buildings, trees, and intervening topography) are sufficient to allow work to proceed and/or determine what level of work exclusion buffers or nest monitoring is needed. This could result in work areas being reduced in size.
- If work cannot proceed without disturbing nesting birds, or if signs of disturbance are observed by the monitor, then work may be halted or redirected to other areas until nesting and fledging are complete or until the nest has otherwise become inactive.

6.3 Mitigation

Mitigation for the loss of Swainson's hawk foraging habitat is required under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) that is administered by the San Joaquin Council of Governments (SJCOG). It was required for the use of Laydown Area F (2.6-acres) during the construction of LEC (CH2M HILL 2009) and the fee rate was based upon the loss of agricultural land.

This current memorandum assumes the same mitigation requirement for the permanent loss of agricultural land that is associated with the proposed storage area based on email communications with Mr. Steve Mayo, Senior Habitat Planner with San Joaquin Council of Governments (SJCOG) (Mayo 2020). The 2020 SJCOG habitat fee structure shows the mitigation fee for loss of agricultural habitat to be \$12,822.00 per acre. Therefore, the total mitigation fee for the loss of 2.323-acres of agricultural land associated with the proposed storage areas would be \$29,785.51.

7. References

CDFW (California Department of Fish and Wildlife). 2020. California Natural Diversity Database. Accessed December 2109. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.

CH2M HILL 2009. Technical Memorandum by Rick Crowe and Russell Huddleston, Biologists, Lodi Energy Center- Proposed Mitigation Measures for Special-Status Species and Variance Request for Giant Garter Snake Upland Habitat through the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, dated 09/30/09.

Mayo, Steve. 2020. Senior Habitat Planner, San Joaquin Council of Governments. Email communications with Rick Crowe of Jacobs. January 27, 2020.

Miles, Scott, and Charles Goudey, eds. 1997. *Ecological Subregions of California*. United States Department of Agriculture, Forest Service. Pacific Southwest Division. R5-EM-TP-005-Net. San Francisco.

USFWS (U.S. Fish and Wildlife Service). 2020a. National Wetlands Inventory Data. Accessed January 21, 2020. <https://www.fws.gov/wetlands/data/data-download.html>.

USFWS (U.S. Fish and Wildlife Service). 2020b. Information for Planning and Consultation. Accessed January 23, 2020. <http://ecos.fws.gov/ipac/>.

USGS (U.S. Geological Survey). 2020. High Resolution National Hydrography Dataset (NHD) Home page. GIS data. Accessed January 21, 2020. <http://nhd.usgs.gov/>.

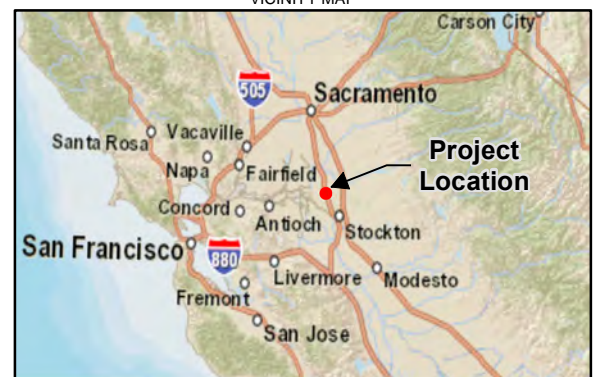
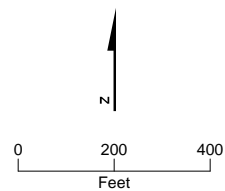
Attachment 1

Figures



VICINITY MAP

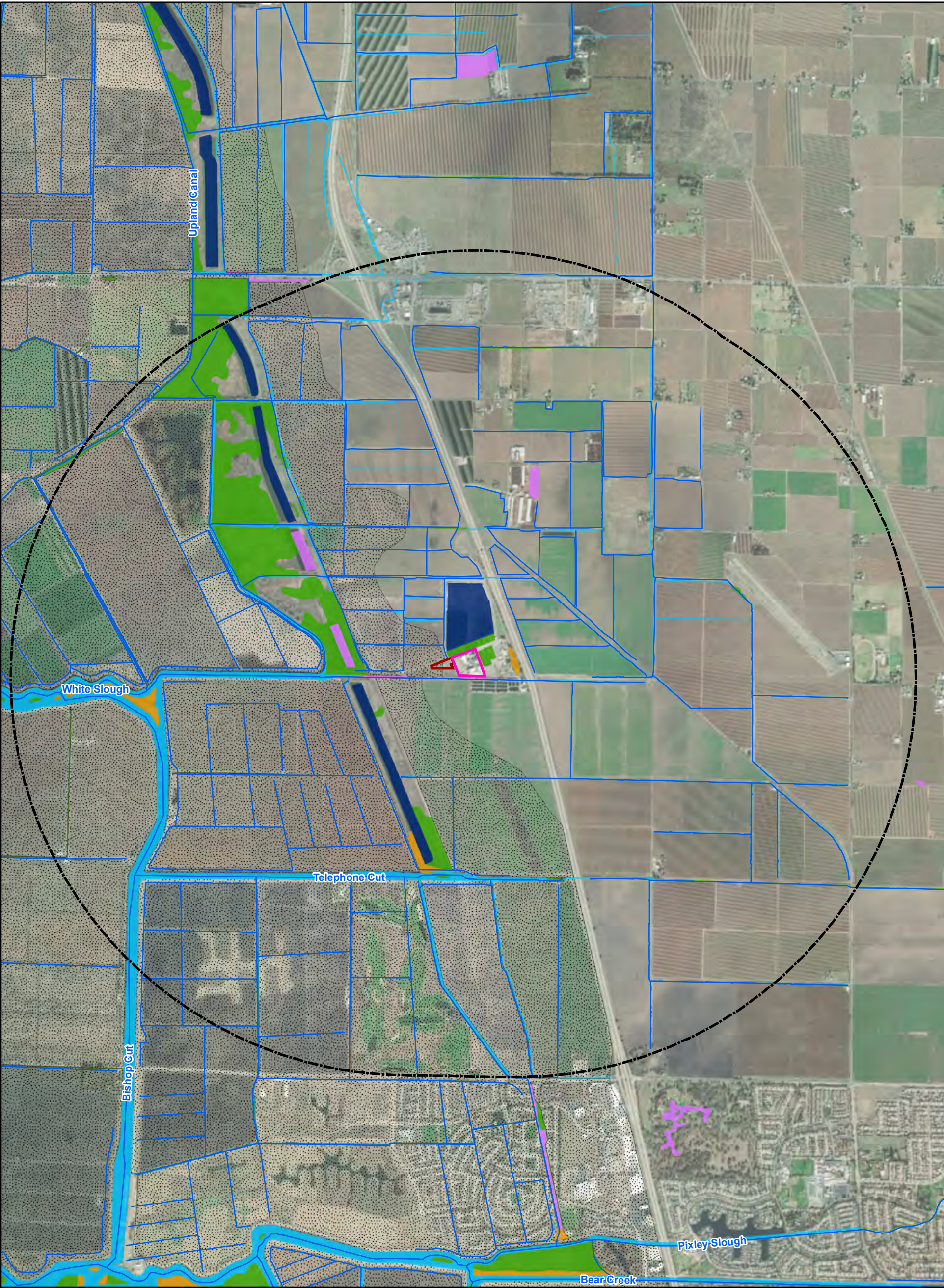
- NCPA-LEC
- Irrigation Canal
- Waste Water Treatment Facility Pond
- Vector Control Pond
- Proposed Storage Area



Source:
Irrigation Canal and man-made ponds; Lodi Energy Center - Wetland
Concerns, Technical Memorandum, CH2M HILL. January 9, 2000

Note:
This map was compiled from various scale source data and maps and is intended
for use as only an approximate representation of actual locations.

FIGURE 1
NCPA - Lodi Energy Center and Proposed Storage Area
NCPA - Lodi Energy Center
Lodi, California



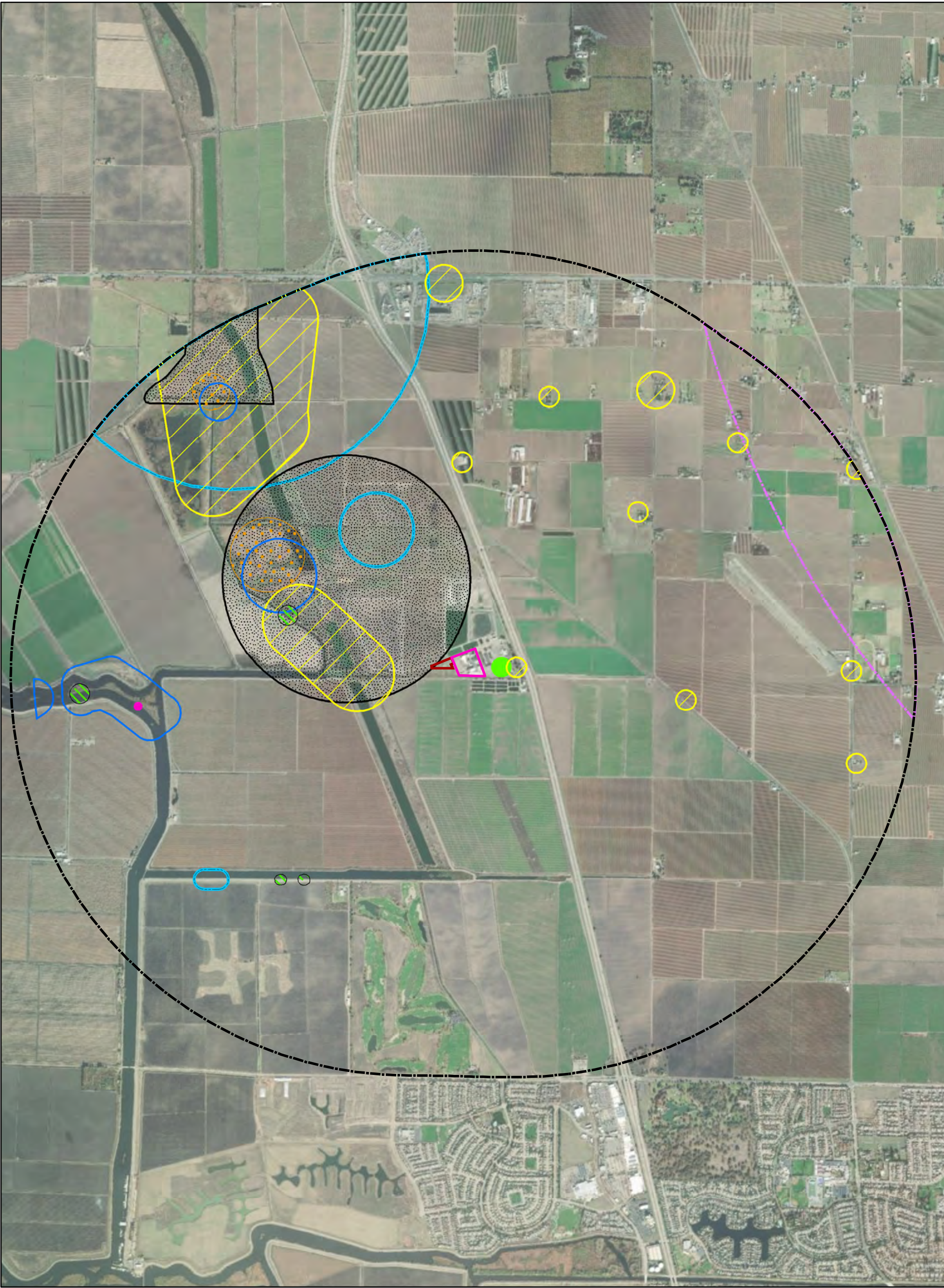
Legend

	Project Area		Freshwater Pond
	NCPA-LEC		Lake
	2-mile Buffer		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		NHD Flowline

Note:
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

NWI, <https://www.fws.gov/wetlands/data/>, accessed April 2019
NHD, <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>, accessed January 2016

FIGURE 2
National Wetland Inventory and National Hydrographical Dataset
NCPA - Lodi Energy Center
Lodi, California



Legend

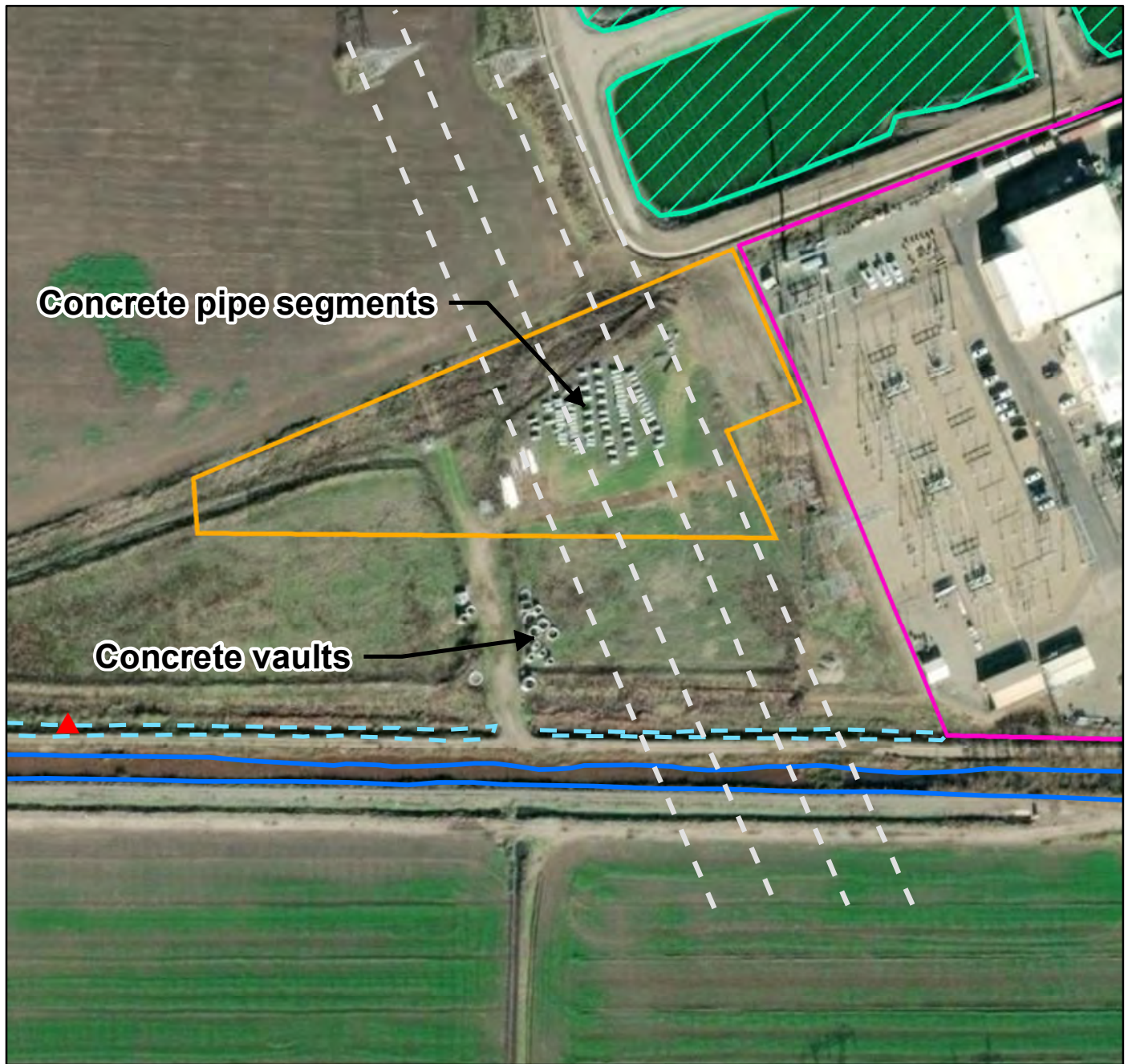
Project Area	giant gartersnake
NCPA-LEC	song sparrow ("Modesto" population)
2-mile Buffer	vernal pool tadpole shrimp
California black rail	western pond turtle
Mason's lilaeopsis	white-tailed kite
Swainson's hawk	woolly rose-mallow

Note:
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CNDDDB, <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>, accessed Dec 2019.

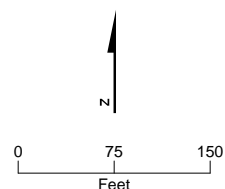
FIGURE 3
California Natural Diversity Data Base
NCPA - Lodi Energy Center
Lodi, California

0 1,250 2,500
Feet



VICINITY MAP

- NCPA-LEC
- Drainage Ditch
- Irrigation Canal
- Waste Water Treatment Facility Pond
- Proposed Storage Area
- Overhead Transmission Lines
- ▲ Observation Point



Source:
Irrigation Canal and man-made ponds, Waste Water Treatment Plant Pond; Lodi Energy Center - Wetland Concerns, Technical Memorandum, CH2M HILL. January 9, 2000

Note:
This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

These overhead power line locations are approximate as shown based on aerial imagery interpretation.

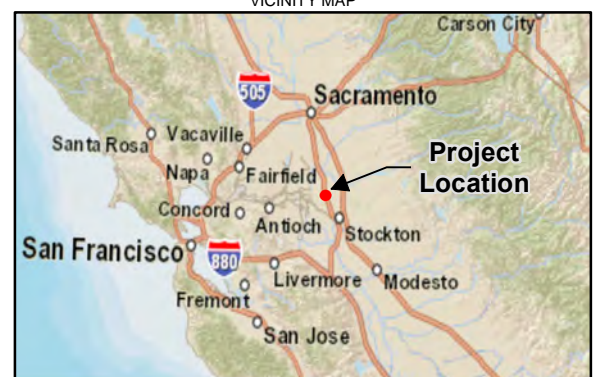


FIGURE 4
Proposed Storage Area
NCPA - Lodi Energy Center
Lodi, California

Attachment 2
Special-Status Species Table and
Biological Resources Summary Tables

Table 2a. California Natural Diversity Database Occurrences within 2 Miles of Proposed Storage Area

SNM	ONM	OCNUMBER	QUADNAME	KEYCOUNT	PLS	ELEVATION	PARTS	ELMTYPE	TAXONGROUP	ECOUNT	ACCURACY	PRESERVE	OCCTYPE	OCRAK	SENSITIVE	SIDATE	ELMDATE	FEDLIST	CALLIST	GRANK	BRANK	RPLANK	TRANK	CPWSTATUS	OTHERSTATUS	LOCATION	LOCDETAILS			
Lepidurus packardii	vernal pool tadpole shrimp	210	Lodi North	3	JQ	T03N, R05E, Sec. 01 (M)	50	1	2	Crustaceans	1.5 miles	Presumed Extant	Natural/Native occurrence	Unknown	N	19900410	19900410	Endangered	None	G4	3354				IUCN, EN	LODI	COLDAN MARSH, 0.8 MILE WEST OF THORNTON ROAD AT HIGHWAY 12.	NO OTHER LOCATION INFORMATION GIVEN.		
Emys marmorata	western pond turtle	68	Terminus	3	JQ	T03N, R05E, Sec. 15 (M)		3	1	2	Reptiles	1.1 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	XXXXXXX	XXXXXXX	None	None	G3G4	53			SSC	BLM, S, IUCN, VU, USFWS, S				
Thamnophis gigas	giant gartersnake	50	Terminus	3	JQ	T03N, R05E, Sec. 23 (M)		10	1	2	Reptiles	1.35 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	19820526	19820526	Threatened	Threatened	G2	52			IUCN, VU					
Buteo swainsoni	Swainson's hawk	1824	Terminus	3	JQ	T03N, R05E, Sec. 14 (M)		0	1	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Thamnophis gigas	giant gartersnake	49	Terminus	3	JQ	T03N, R05E, Sec. 15 (M)		3	1	2	Reptiles	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Good	N	20100923	20100923	Threatened	Threatened	G2	52			IUCN, VU					
Melospiza melodia	song sparrow ("Modesto" population)	24	Terminus	3	JQ	T03N, R05E, Sec. 28, N (M)		0	3	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC					
Buteo swainsoni	Swainson's hawk	1822	Terminus	3	JQ	T03N, R05E, Sec. 23, SW (M)		0	1	2	Birds	1 nonspecific area	Presumed Extant	Natural/Native occurrence	Unknown	N	20090423	20090423	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Laterallus jamaicensis coturniculus	California black rail	10	Terminus	3	JQ	T03N, R05E, Sec. 23, NW (M)		0	1	2	Birds	1.5 mile	Presumed Extant	Natural/Native occurrence	Good	N	20090521	20090521	None	Threatened	G3G4T1	51			FP	BLM, S, IUCN, NT, NABCI, RWL, USFWS, BCC	WHITE SLOUGH WILDLIFE AREA, APPROXIMATELY 1.5 MILES SSW OF I-5 AT HWY 12, NW OF STOCKTON.			
Melospiza melodia	song sparrow ("Modesto" population)	25	Terminus	3	JQ	T03N, R05E, Sec. 23, W (M)		0	1	2	Birds	1.5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC					
Emys marmorata	western pond turtle	69	Terminus	3	JQ	T03N, R05E, Sec. 23, NW (M)		4	1	2	Reptiles	1.5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	XXXXXXX	XXXXXXX	None	None	G3G4	53			SSC	BLM, S, IUCN, VU, USFWS, S				
Laterallus jamaicensis coturniculus	California black rail	297	Terminus	3	JQ	T03N, R05E, Sec. 15, SE (M)		2	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20100326	20100326	None	Threatened	G3G4T1	51			FP	BLM, S, IUCN, NT, NABCI, RWL, USFWS, BCC	WHITE SLOUGH WILDLIFE AREA, ABOUT 1.5 MI SSW OF I-5 AT HWY 12, 7.5 MI WSW OF LODI.			
Buteo swainsoni	Swainson's hawk	2291	Lodi South	3	JQ	T03N, R06E, Sec. 18, SW (M)		15	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	2003XXXX	2003XXXX	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Melospiza melodia	song sparrow ("Modesto" population)	26	Terminus	3	JQ	T03N, R05E, Sec. 15, SE (M)		0	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20090521	20090521	None	None	G5	537			SSC					
Buteo swainsoni	Swainson's hawk	1191	Terminus	3	JQ	T03N, R05E, Sec. 14 (M)		10	1	2	Birds	1.1/10 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	20000602	20000602	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Emys marmorata	western pond turtle	515	Terminus	3	JQ	T03N, R05E, Sec. 27 (M)		5	1	2	Reptiles	1 specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19990805	19990805	None	None	G3G4	53			SSC	BLM, S, IUCN, VU, USFWS, S				
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	166	Terminus	3	JQ	T03N, R05E, Sec. 28, NE (M)		5	1	1	Dicots	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20050825	20050825	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG					
Buteo swainsoni	Swainson's hawk	1648	Lodi South	3	JQ	T03N, R06E, Sec. 18, SW (M)		18	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Elanus leucurus	white-tailed kite	150	Terminus	3	JQ	T03N, R05E, Sec. 24, SW (M)		5	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20080430	20080430	None	None	G5	3354			FP	BLM, S, IUCN, LC				
Buteo swainsoni	Swainson's hawk	583	Lodi South	3	JQ	T03N, R06E, Sec. 30, NW (M)		10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020711	20020711	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1644	Lodi South	3	JQ	T03N, R06E, Sec. 19, SE (M)		17	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1825	Terminus	3	JQ	T03N, R05E, Sec. 13, SW (M)		10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20090701	20090701	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1639	Terminus	3	JQ	T03N, R05E, Sec. 13, SW (M)		16	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1638	Lodi South	3	JQ	T03N, R06E, Sec. 17, SW (M)		22	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1637	Lodi South	3	JQ	T03N, R05E, Sec. 24, NE (M)		15	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20020721	20020721	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	1823	Terminus	3	JQ	T03N, R05E, Sec. 24, SW (M)		10	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20090701	20090701	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Buteo swainsoni	Swainson's hawk	819	Lodi South	3	JQ	T03N, R06E, Sec. 29, SW (M)		15	1	2	Birds	1.80 meters	Presumed Extant	Natural/Native occurrence	Good	N	20010628	20010628	None	Threatened	G5	53			BLM, S, IUCN, LC, USFWS, BCC					
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	97	Terminus	3	JQ	T03N, R05E, Sec. 23 (M)		0	1	1	Dicots	1.80 meters	Presumed Extant	Natural/Native occurrence	Good	N	19880203	19880203	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG					
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	133	Terminus	3	JQ	T03N, R05E, Sec. 36, NW (M)		0	2	1	Dicots	1 specific area	Presumed Extant	Natural/Native occurrence	Good	N	19990805	19990805	None	None	G5T3	53	18.2		SB, RSABG, SB, UCBBG					
Liocopsis masoni	Mason's liocopsis	200	Terminus	3	JQ	T03N, R05E, Sec. 27, NW (M)		5	1	1	Dicots	1 specific area	Presumed Extant	Natural/Native occurrence	Poor	N	20090824	20090824	None	Rare	G2	52	18.1							

Source: California Department of Fish and Wildlife / California Natural Diversity Database, Accessed January 22, 2020

Source: California Department of Fish and Wildlife, "California Natural Diversity Database, Accessed January 22, 2015

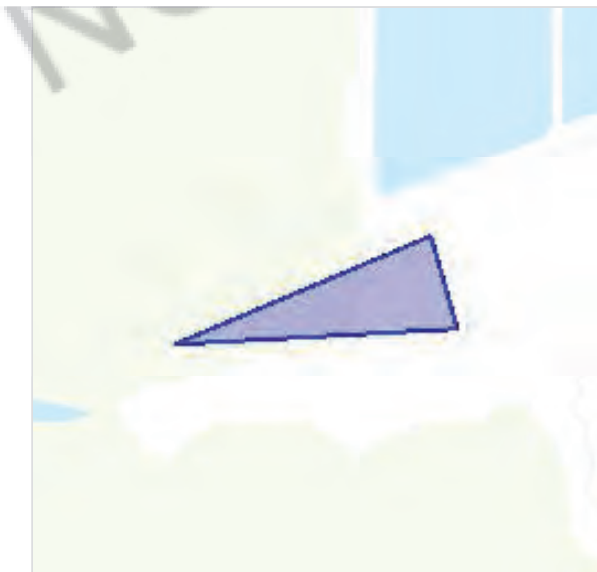
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Joaquin County, California



Local office

San Francisco Bay-Delta Fish And Wildlife

☎ (916) 930-5603

📠 (916) 930-5654

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

[http://kim_squires@fws.gov](mailto:kim_squires@fws.gov)

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Riparian Brush Rabbit <i>Sylvilagus bachmani riparius</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6189	Endangered

Reptiles

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

Amphibians

NAME	STATUS
------	--------

California Red-legged Frog *Rana draytonii*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

California Tiger Salamander *Ambystoma californiense*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2076>

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/321>

Insects

NAME

STATUS

San Bruno Elfin Butterfly *Callophrys mossii bayensis*

Endangered

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/3394>

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

Threatened

Crustaceans

NAME

STATUS

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

Threatened

Vernal Pool Tadpole Shrimp *Lepidurus packardii*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2246>

Endangered

Flowering Plants

NAME

STATUS

Large-flowered Fiddleneck *Amsinckia grandiflora*
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/5558>

Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Delta Smelt <i>Hypomesus transpacificus</i> https://ecos.fws.gov/ecp/species/321#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

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

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

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Burrowing Owl *Athene cunicularia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9737>

Breeds Mar 15 to Aug 31

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

Lawrence's Goldfinch *Carduelis lawrencei*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Breeds Mar 20 to Sep 20

Lewis's Woodpecker *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Long-billed Curlew *Numenius americanus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/5511>

Breeds elsewhere

Marbled Godwit *Limosa fedoa*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Breeds elsewhere

Nuttall's Woodpecker *Picoides nuttallii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Breeds Apr 1 to Jul 20

Oak Titmouse *Baeolophus inornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Breeds Mar 15 to Jul 15

Short-billed Dowitcher *Limnodromus griseus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Breeds elsewhere

Song Sparrow *Melospiza melodia*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Feb 20 to Sep 5

Spotted Towhee *Pipilo maculatus clementae*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/4243>

Breeds Apr 15 to Jul 20

Tricolored Blackbird *Agelaius tricolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Breeds Mar 15 to Aug 10

Whimbrel *Numenius phaeopus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9483>

Breeds elsewhere

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Yellow-billed Magpie *Pica nuttalli*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

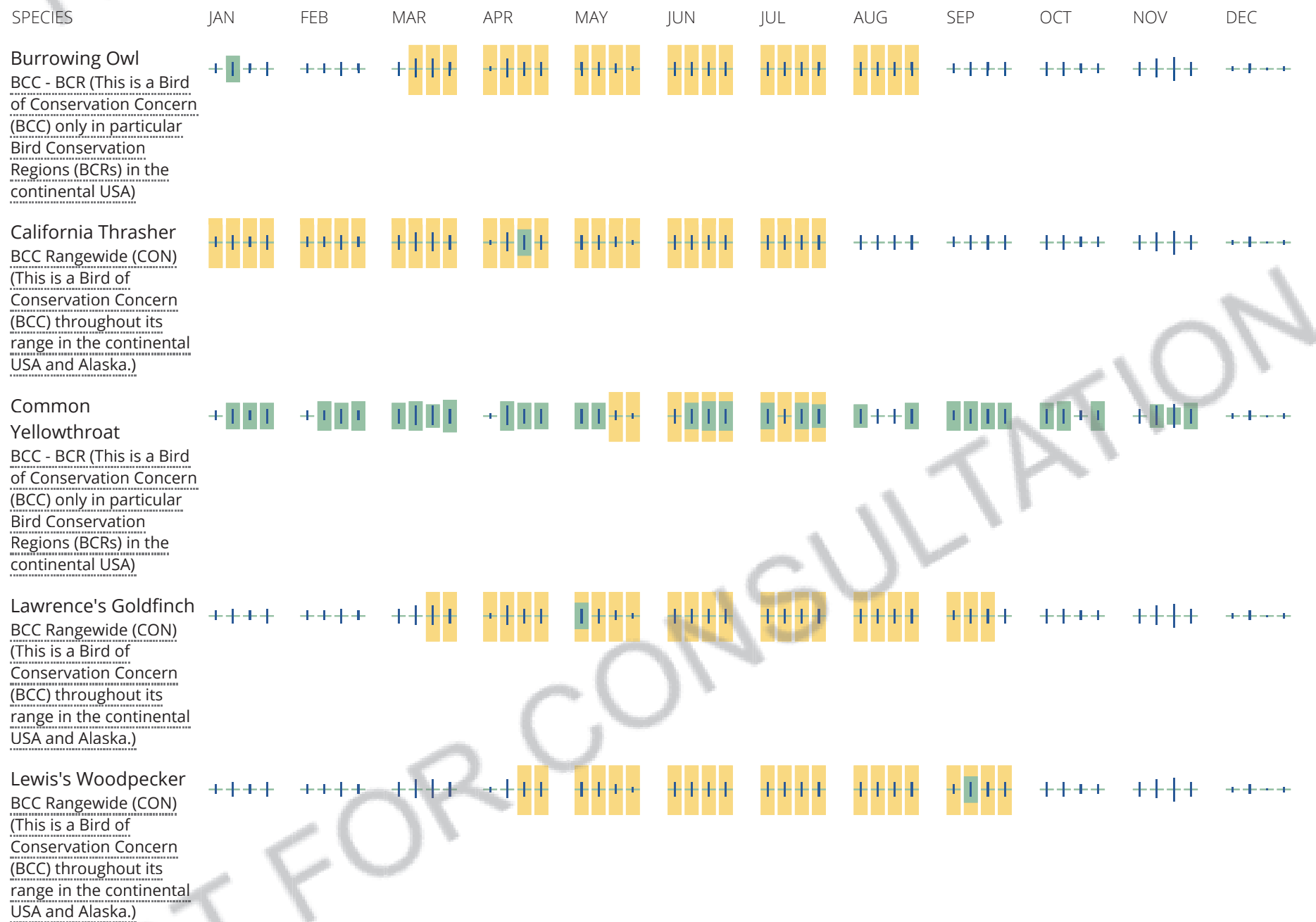
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort — no data



Long-billed Curlew
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



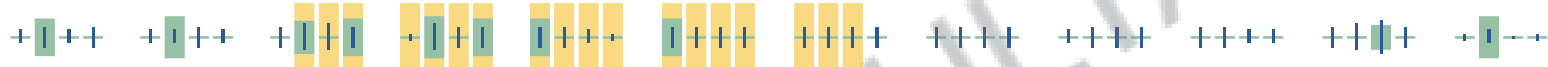
Marbled Godwit
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



Nuttall's Woodpecker
BCC - BCR (This is a Bird
of Conservation Concern
(BCC) only in particular
Bird Conservation
Regions (BCRs) in the
continental USA)

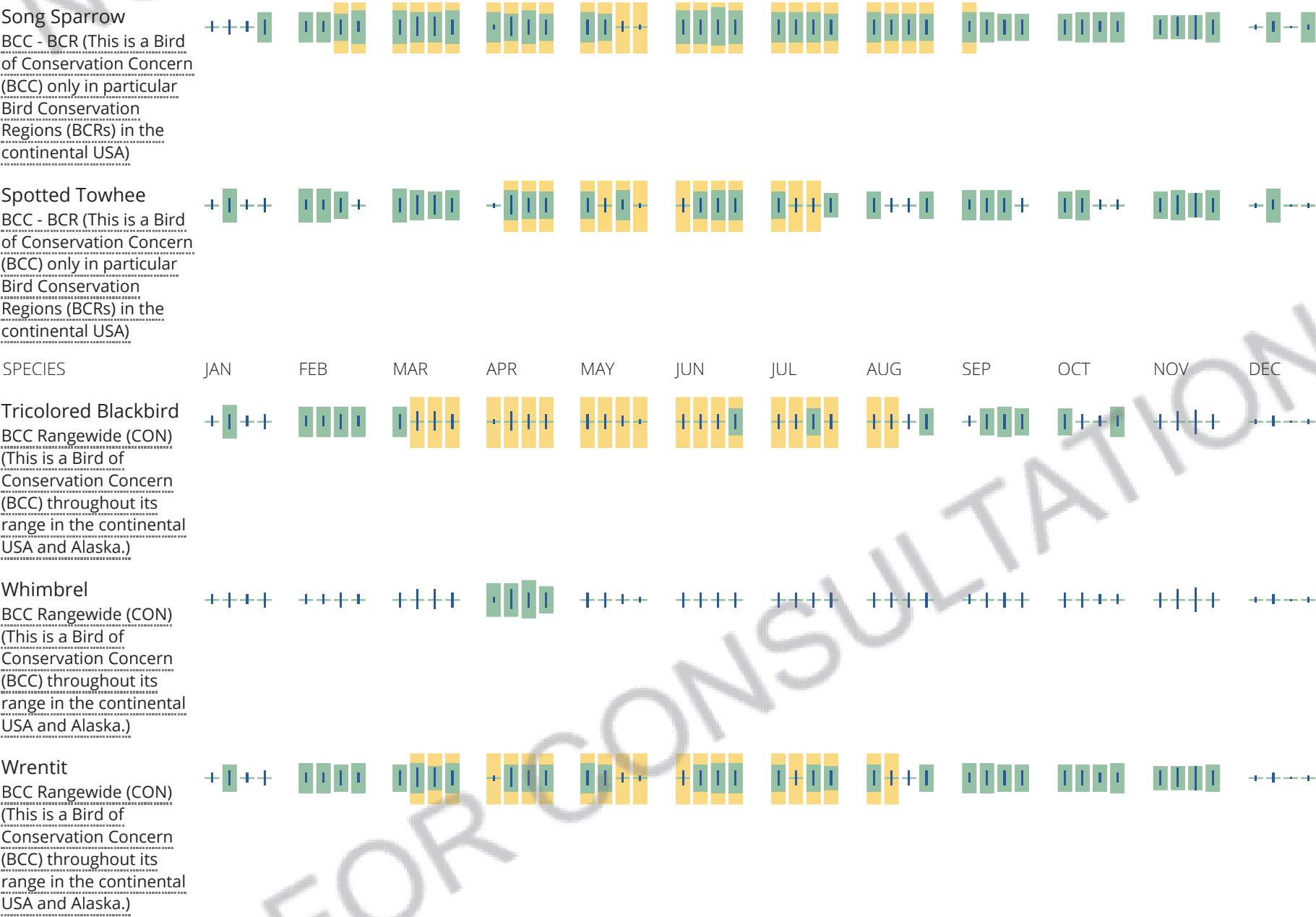


Oak Titmouse
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)

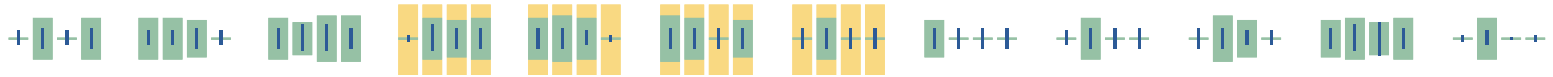


Short-billed
Dowitcher
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)





Yellow-billed Magpie
BCC Rangewide (CON)
(This is a Bird of
Conservation Concern
(BCC) throughout its
range in the continental
USA and Alaska.)



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

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1Kx](#)

OTHER

[Pf](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment 3

Photographs



Photograph 1. View south-southeast along western edge of the NCPA-LEC switchyard that represents the northeastern edge of the proposed storage area.



Photograph 2. View of one of several small sink-holes that are found along the northeastern edge of the proposed storage area.



Photograph 3. View west of the irrigation canal from near the southwest corner of the NCPA-LEC property.



Photograph 4. View east of the irrigation canal from near the southwest corner of the NCPA-LEC property.



Photograph 5. View north-northwest along the western edge of the NCPA-LEC property, with the drainage ditch.



Photograph 6. View east-northeast of the concrete channel separating the NCPA-LEC on right from the Lodi Wastewater Treatment Facility on left. Photograph taken from the northeast corner of proposed storage facility.



Photograph 7. View northwest of the Lodi Wastewater Treatment Facility ponds near the northeast corner of proposed storage facility.



Photograph 8. View west-southwest along northern boundary of proposed storage area showing ruderal vegetation (mostly milk thistle and mustard) in the northeast portion and the concrete pipe segments currently stored on site.



Photograph 9. View of a storm drain vault that indicates an underground pipe running along the northern boundary of the proposed storage area.



Photograph 10. View northeast of the proposed storage area from near its western end. NCPA-LEC (right) and Lodi WWTF (left) are in background.



Photograph 11. View east of the drainage ditch about 180 feet south of the proposed storage area.



Photograph 12. View west of the drainage ditch about 180 feet south of the proposed storage area. The irrigation canal is located to the left beyond the existing roadway.



Photograph 13. View west of the flooded irrigation canal more than 200 feet south of the proposed storage area.



Photograph 14. View east of the flooded irrigation canal more than 200 feet south of the proposed storage area.



Photograph 15. View east of drainage ditch channel from the Observation Point.



Photograph 16. View south of the drainage ditch channel at the Observation Point.



Photograph 17. View west of the drainage ditch channel from the Observation Point



Photograph 18. View east along the northern edge of the drainage ditch from near the Observation Point.



Photograph 19. View east-northeast showing shallow soil berm just before concrete pipes and monitoring well pad. Note the lowest overhead transmissions lines occur near the concrete pipe segments.



Photograph 20. View west-southwest showing recent grading of fill along northern boundary of the proposed storage area.



Photograph 21. View south from southern edge of proposed storage area showing recent grading and concrete vaults.



Photograph 22. View north of shallow soil berm near the concrete pipe segments.



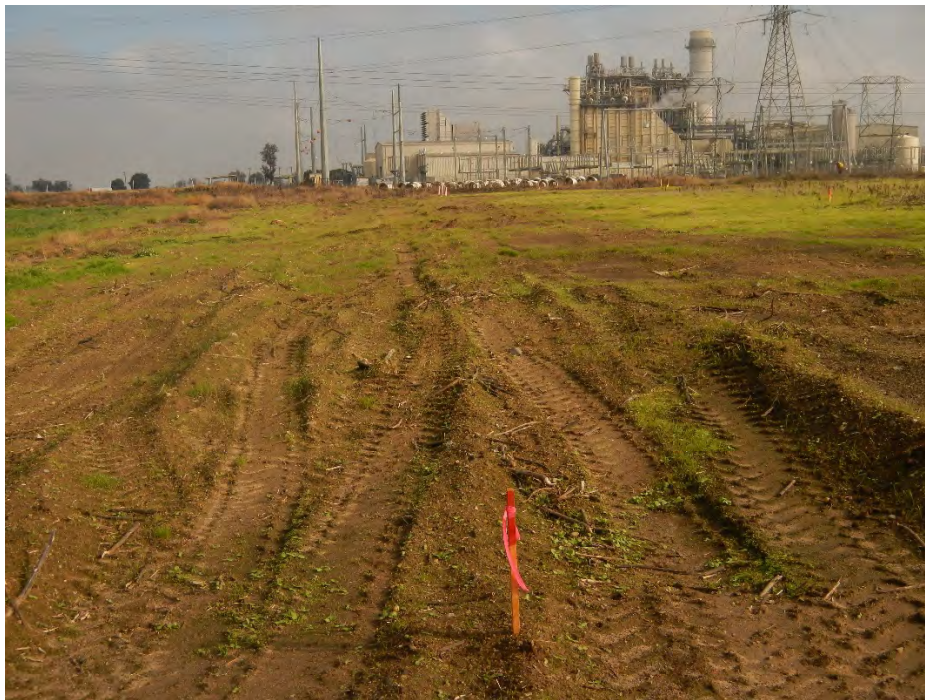
Photograph 23. View west of shallow soil berm to south of the concrete pipe segments.



Photograph 24. View east of concrete pipe segments that currently provide potential wildlife cover.



Photograph 25. View east along southern boundary of the proposed storage shown approximately by wood stakes in fore- and background.



Photograph 26. View east-northeast along northern boundary of the proposed storage shown approximately by wood stake in foreground and northern edge of the NCPA-LEC in background.

USER ENVIRONMENTAL SITE ASSESSMENT (ESA) QUESTIONNAIRE

User/Client

Interview Date:

Name:

Title:

Company/Organization:

Status:

What is the reason why the Phase I is required? – NCPA to Lease property from

the city of Lodi for storage.

What is the current use of the property? Storage/Ag/No Use

What type of property transaction is it?

Sale

Purchase

Exchange

Other - Lease

Have you engaged a title company or professional to review recorded land title records and lien records?

Yes

No - X

If yes describe:

What were the results of the title review? - NA

Who is the site contact for the property? - City of Lodi White Slough Water Pollution Control Facility – Superintendent Kenneth Capintanich, 12751 N. Thornton Road, Lodi CA. (209) 333-6749

How can the site contact be reached? - [See above.](#)

USER ENVIRONMENTAL SITE ASSESSMENT (ESA) QUESTIONNAIRE

Who is the owner of the property? - City of Lodi

Who are the occupants of the property? City of Lodi

Other than you, what other parties will rely on the Phase I report?

Yes

No

If yes describe: - California Energy Commission (CEC)

Are there any special terms and conditions that must be agreed upon by the Environmental professional?

Yes

No - None

If yes describe:

Do you have any other knowledge or experience with the property that may be pertinent to the environmental professional?

Yes

No - None

If yes describe:

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Yes

No - None

If yes describe:

USER ENVIRONMENTAL SITE ASSESSMENT (ESA) QUESTIONNAIRE

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry?

Yes

No - None

If yes describe:

As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties?

Yes

No - None

If yes describe:

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If not, have you considered whether the price difference is due to contamination?

Yes - X

No

Additional Information

Do you know the past uses of the property?

Yes

No - None

If yes describe:

USER ENVIRONMENTAL SITE ASSESSMENT (ESA) QUESTIONNAIRE

Do you know of specific chemicals that are present or once were present at the property?

Yes

No - **None**

If yes describe:

Do you know of spills or other chemical releases that have taken place at the property?

Yes

No - **None**

If yes describe:

Do you know of any environmental cleanups that have taken place at the property?

Yes

No - **None**

If yes describe:

As the user of the ESA, based on your knowledge and experience related to the property, are there any indicators that point to the presence or likely presence of contamination at the property?

Yes

No - **None**

If yes describe:

Are any services beyond the requirements of Practice E1527 required?

Yes

No

If yes describe:

USER ENVIRONMENTAL SITE ASSESSMENT (ESA) QUESTIONNAIRE

This form has been completed by the person(s) indicated below:



Signed

Michael J. Fallon

Print Name

EHS specialist

Title

2/11/20

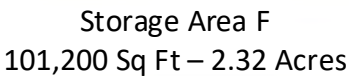
Date

Signed

Print Name

Title

Date



Storage Area F
101,200 Sq Ft – 2.32 Acres

APPENDIX H

Photo Log

GEOSYNTEC CONSULTANTS
Photographic Record



Client: Northern California Power Agency **Project Number:** SAC278

Site Name: Lodi Energy Center – Area F **Site Location:** 12745 North Thornton Road, Lodi, California

Photograph 1

Date: 2/18/2020

Direction: Southwest

Comments: View of concrete pipes stored on the Site.



Photograph 2

Date: 2/18/2020

Direction: West

Comments: View of various equipment and materials being stored on pallets on the Site.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Northern California Power Agency **Project Number:** SAC278

Site Name: Lodi Energy Center – Area F **Site Location:** 12745 North Thornton Road, Lodi, California

Photograph 3

Date: 2/18/2020

Direction: West

Comments: Empty bucket of sealant. No evidence of a release.



Photograph 4

Date: 2/18/2020

Direction: North

Comments: Monitoring well observed in the northern portion of the Site.



GEOSYNTEC CONSULTANTS

Photographic Record



Client: Northern California Power
Agency

Project Number: SAC278

Site Name: Lodi Energy Center – Area F **Site Location:** 12745 North Thornton Road, Lodi, California

Photograph 5

Date: 2/18/2020

Direction: East

Comments:
Monitoring well
observed in the central
portion of the Site.



Photograph 6

Date: 2/18/2020

Direction: North

Comments: View of
distressed vegetation
on the Site.



GEOSYNTEC CONSULTANTS

Photographic Record



Client: Northern California Power Agency **Project Number:** SAC278

Site Name: Lodi Energy Center – Area F **Site Location:** 12745 North Thornton Road, Lodi, California

Photograph 7

Date: 2/18/2020

Direction: East

Comments: View of stressed vegetation and soil discoloration.



Photograph 8

Date: 2/18/2020

Direction: NA

Comments: Stressed vegetation and soil discoloration.



GEOSYNTEC CONSULTANTS
Photographic Record



Client: Northern California Power Agency

Project Number: SAC278

Site Name: Lodi Energy Center – Area F

Site Location: 12745 North Thornton Road, Lodi, California

Photograph 9

Date: 2/18/2020

Direction: Northeast

Comments: Stressed vegetation.



Photograph 10

Date: 2/18/2020

Direction: North

Comments: Stockpiled soil in eastern portion of Site.

