



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION  
FAMILY WATER ALLIANCE PHASE 8 PROJECTS  
SOUTH SUTTER WATER DISTRICT

May 2014

LEAD AGENCY:

South Sutter Water District  
2464 Pacific Avenue  
Trowbridge, CA 95659  
(530) 656-2242

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# TABLE OF CONTENTS

## INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FAMILY WATER ALLIANCE PHASE 8 PROJECTS SOUTH SUTTER WATER DISTRICT

|  |      |
|--|------|
| ACRONYMS .....   | iii  |
| 1.0 INTRODUCTION .....   | 1-1  |
| 1.1 Purpose of Study.....  | 1-1  |
| 1.2 Environmental Factors Potentially Affected .....                     | 1-1  |
| 1.3 Evaluation Terminology.....  | 1-2  |
| 1.4 Organization of the Initial Study .....                              | 1-2  |
| 2.0 PROJECT DESCRIPTION .....  | 2-1  |
| 2.1 Introduction .....   | 2-1  |
| 2.2 Project Location .....   | 2-1  |
| 2.3 Project Objectives .....   | 2-1  |
| 2.4 Proposed Project.....  | 2-1  |
| 2.4.1 Construction Activities.....                                       | 2-8  |
| 2.4.2 Operation and Maintenance Activities .....                         | 2-8  |
| 2.5 Permits and Approvals Needed .....                                   | 2-8  |
| 3.0 EVALUATION OF ENVIRONMENTAL IMPACTS .....                            | 3-1  |
| 1. Aesthetics.....   | 3-1  |
| 2. Agriculture and Forestry Resources .....                              | 3-3  |
| 3. Air Quality.....  | 3-5  |
| 4. Biological Resources.....   | 3-10 |
| 5. Cultural Resources.....   | 3-23 |
| 6. Geology and Soils .....   | 3-29 |
| 7. Greenhouse Gas Emissions .....  | 3-34 |
| 8. Hazards and Hazardous Materials.....                                  | 3-36 |
| 9. Hydrology and Water Quality .....                                     | 3-40 |
| 10. Land Use and Planning.....   | 3-43 |
| 11. Mineral Resources .....  | 3-44 |
| 12. Noise .....  | 3-46 |
| 13. Population and Housing .....   | 3-47 |
| 14. Public Services.....   | 3-48 |
| 15. Recreation .....   | 3-49 |
| 16. Transportation and Circulation .....                                 | 3-50 |
| 17. Utilities and Service Systems.....                                   | 3-52 |
| 18. Mandatory Findings of Significance .....                             | 3-54 |
| 4.0 SIGNIFICANCE DETERMINATION .....                                     | 4-1  |
| 5.0 LIST OF PREPARERS .....  | 5-1  |
| 5.1 South Sutter Water District (Lead Agency).....                       | 5-1  |
| 5.2 California Department of Fish And Wildlife (Responsible Agency)..... | 5-1  |
| 5.3 Environmental Consultants .....                                      | 5-1  |
| 6.0 REFERENCES .....   | 6-1  |

**LIST OF FIGURES**

---

Figure 1: Regional Location ..... 2-2  
Figure 2: Site and Vicinity ..... 2-3  
Figure 3: Aerial Photograph ..... 2-4  
Figure 4: Proposed Project Design ..... 2-6  
Figure 5: Habitat Types ..... 3-11  
Figure 6: Critical Habitats ..... 3-13  
Figure 7: Project Impacts to Habitat Types ..... 3-18  
Figure 8: Regional Faults and Seismic Hazards ..... 3-31

**LIST OF TABLES**

---

Table 1: State and National Ambient Air Quality Standards ..... 3-6  
Table 2: Project Site Soil Characteristics ..... 3-30  
Table 3: 2012 Rates of Water Diversion (acre-feet) ..... 3-42

**LIST OF APPENDICES**

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- Appendix A: Vascular Plant List
- Appendix B: Species Table
- Appendix C: Cultural Report (Bound Separately)
- Appendix D: Impacts of Pile Driving Activities
- Appendix E: Fish Avoidance Plan

# ACRONYMS

---

## A

|       |                                   |
|-------|-----------------------------------|
| AES   | Analytical Environmental Services |
| af    | acre-feet                         |
| APCDs | Air Pollution Control Districts   |
| AQMDs | Air Quality Management Districts  |

## B

|      |                           |
|------|---------------------------|
| BMPs | Best Management Practices |
|------|---------------------------|

## C

|                 |  |
|-----------------|--|
| CAA             | 1977 Federal Clean Air Act                             |
| CAAQS           | California Ambient Air Quality Standards               |
| CAPCOA          | California Air Pollution Control Officers' Association |
| CARB            | California Air Resources Board                         |
| CDC             | California Department of Conservation                  |
| CDFW            | California Department of Fish and Wildlife             |
| CDMG            | California Division of Mines and Geology               |
| CEQA            | California Environmental Quality Act                   |
| CESA            | California Endangered Species Act                      |
| CFR             | Code of Federal Regulations                            |
| cfs             | cubic feet per second                                  |
| CGS             | California Geographical Society                        |
| CNDDB           | California Natural Diversity Database                  |
| CNPS            | California Native Plant Society                        |
| CO              | carbon monoxide  |
| CO <sub>2</sub> | carbon dioxide   |
| CRHR            | California Register of Historical Resources            |
| CWA             | Federal Clean Water Act                                |

## D

|          |                               |
|----------|-------------------------------|
| dB       | decibel                       |
| dBA      | A-weighted decibel            |
| dBA Ldn. | day-night average sound level |

## E

|     |                                      |
|-----|--------------------------------------|
| EIR | Environmental Impact Report          |
| EPA | U.S. Environmental Protection Agency |
| ESA | Federal Endangered Species Act       |

## F

FEMA Federal Emergency Management Agency  
FIRMs Flood Insurance Rate Maps  
FMMP Farmland Mapping and Monitoring Program  
FWA Family Water Alliance

**G**

GHGs Greenhouse Gases

**I**

IS Initial Study  
ISI Intake Screens, Inc.

**M**

MBTA Migratory Bird Treaty Act  
MRZs Mineral Resource Zones  
msl mean sea level

**N**

NAAQS National Ambient Air Quality Standards  
NAHC Native American Heritage Commission  
NCIC North Central Information Center  
ND Negative Declaration  
NEPA National Environmental Policy Act  
NHPA National Historic Preservation Act  
NMFS National Marine Fisheries Service  
NO<sub>x</sub> Oxides of Nitrogen  
NPDES National Pollutant Discharge Elimination System  
NRCS Natural Resource Conservation Service  
NRHP National Register of Historic Places

**O**

O<sub>3</sub> Ozone

**P**

PCAPCD Placer County Air Pollution Control District  
PG&E Pacific Gas & Electric Company  
PM<sub>10</sub> particulate matter less than 10 micrometers in diameter (respirable particulate matter)

**R**

ROG Reactive Organic Gasses  
RWQCB Regional Water Quality Control Board

**S**

|                 |   |
|-----------------|---|
| SAA             | Streambed Alteration Agreement                |
| SCS             | USDA Soil Conservation Service                |
| SEL             | sound exposure level                          |
| SHPO            | State Historic Preservation Officer           |
| SMARA           | California Surface Mining and Reclamation Act |
| SSWD            | South Sutter Water District                   |
| SO <sub>x</sub> | sulfur oxides                                 |
| SOPs            | Standard Operating Procedures                 |
| SR              | State Route                                   |
| SVAB            | Sacramento Valley Air Basin                   |
| SVP             | Society of Vertebrate Paleontology            |
| SWPPP           | Stormwater Pollution Prevention Plan          |

### U

|       |                                       |
|-------|---------------------------------------|
| USACE | United States Army Corps of Engineers |
| USDA  | U.S. Department of Agriculture        |
| USGS  | U.S. Geological Survey                |
| USFWS | U.S. Fish and Wildlife Service        |
| µm    | Micrometers                           |

### V

|        |                                     |
|--------|-------------------------------------|
| VHFHSZ | Very high fire hazard severity zone |
|--------|-------------------------------------|

# 1.0 INTRODUCTION

---

## SOUTH SUTTER WATER DISTRICT (SSWD), PLEASANT GROVE CANAL

### 1.1 PURPOSE OF STUDY

This document examines the potential environmental effects associated with the installation of fish screens at the existing South Sutter Water District (SSWD) Pleasant Grove Canal, located approximately 5.4 miles west of the City of Lincoln, California. The SSWD Pleasant Grove Canal Fish Screen Project (Proposed Project) consists of installing two fish screens at the base of the existing Pleasant Grove Canal off of the Auburn Ravine and installing permanent sheet-pile at the base of the canal to block unscreened water. This action will require the issuance of a Streambed Alteration Agreement (SAA) and is being funded in part from a grant provided by California Department of Fish and Wildlife (CDFW; formerly known as the California Department of Fish and Game). The SSWD is the Lead Agency for the environmental analysis of the Proposed Project under the California Environmental Quality Act (CEQA). This Initial Study (IS) has been prepared for SSWD in accordance with CEQA of 1970 (as amended), codified in California Public Resources Code Sections 21000 *et seq.*, and the State CEQA *Guidelines* in the Code of Regulations, Title 14, Division 6, Chapter 3.

This installation is part of a larger State and Federal grant program designed to ensure that fish screens are installed on diversions throughout the Sacramento River watershed. In order to complete the installation, a CEQA document must be approved by the Lead Agency so that the CDFW can issue a SAA for the project. This IS identifies potentially significant impacts, and, where applicable, presents mitigation measures that would reduce all identified environmental impacts to less-than-significant levels. Therefore, as discussed in **Section 4.0**, this IS would support a Mitigated Negative Declaration as defined under CEQA *Guidelines* Section 15070 and a Categorical Exclusion for National Environmental Policy Act (NEPA) compliance in accordance with 40 CFR 1508.4.

### 1.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the Proposed Project, involving at least one impact requiring mitigation to bring it to a less-than-significant level. Impacts to these resources are evaluated using the checklist included in **Section 3.0**. The Proposed Project was determined to have a less-than-significant impact or no impact even without mitigation on unchecked resource areas.

- |   |  |
|---|--|
| <input type="checkbox"/> Aesthetics                                 | <input type="checkbox"/> Land Use and Planning                         |
| <input type="checkbox"/> Agriculture and Forestry Resources         | <input type="checkbox"/> Mineral Resources                             |
| <input type="checkbox"/> Air Quality                                | <input type="checkbox"/> Noise   |
| <input checked="" type="checkbox"/> Biological Resources            | <input type="checkbox"/> Population and Housing                        |
| <input checked="" type="checkbox"/> Cultural Resources              | <input type="checkbox"/> Public Services                               |
| <input checked="" type="checkbox"/> Geology and Soils               | <input type="checkbox"/> Recreation                                    |
| <input type="checkbox"/> Greenhouse Gas Emissions                   | <input type="checkbox"/> Transportation and Circulation                |
| <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Utilities and Service Systems                 |
| <input checked="" type="checkbox"/> Hydrology and Water Quality     | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

### 1.3 EVALUATION TERMINOLOGY

The following terminology is used to describe the levels of significance for impacts identified for each resource area discussed in **Section 3.0**.

- A conclusion of **no impact** is used when it is determined that the proposed project would not adversely impact the resource area under evaluation.
- A conclusion of **less-than-significant impact** is used when it is determined that the proposed project's adverse impacts to a resource area would not exceed established thresholds of significance.
- A conclusion of **less-than-significant impact with mitigation** is used when it is determined that mitigation measures would be required to reduce the proposed project's adverse impacts below established thresholds of significance.
- A conclusion of **potentially significant impact** is used when it is determined that the proposed project's adverse impacts to a resource area potentially cannot be mitigated to a level that is less than significant.

### 1.4 ORGANIZATION OF THE INITIAL STUDY

This document is organized into the following sections:

**Section 1.0 – Introduction:** Describes the purpose, contents, and organization of the document.

**Section 2.0 – Project Description:** Includes a detailed description of the Proposed Project.

**Section 3.0 – Environmental Analysis (Checklist):** Contains the Environmental Checklist from CEQA *Guidelines* Appendix G with a discussion of potential environmental effects associated with the Proposed Project. Mitigation measures, if necessary, are noted following each impact discussion.

**Section 4.0 – Significance Determination:** Identifies the determination of whether impacts associated with development of the Proposed Project are significant, and what, if any, additional environmental documentation may be required.

**Section 5.0 – Consultation and Preparation**

**Section 6.0 – References**

**Appendices** – Contains technical reports and other information to supplement **Section 3.0.**

## 2.0 PROJECT DESCRIPTION

---

### 2.1 INTRODUCTION

The South Sutter Water District (SSWD) operates the Pleasant Grove canal, a small diversion off Auburn Ravine, for groundwater replenishment and agricultural purposes. SSWD operates the canal under water right License 4653 (Application 14430) from Coon Creek and License 11121 (Application 22102) from Coon Creek, Markham Ravine, East Side Canal, and Auburn Ravine. License 4653 authorizes the diversion of 825.9 acre-feet (af) per year, and License 11121 authorizes the diversion of up to 4,769 af per year. The current practice to divert water involves installing temporary flashboards in the spring and removal in the fall, which can impede upstream migration of anadromous fish. The Proposed Project consists of the installation of two cone fish screens at the entrance of the existing Pleasant Grove Canal and associated sheet-pile to improve fish migration corridors on the Auburn Ravine. The Family Water Alliance (FWA) is acting as the lead agent under the grant and in obtaining appropriate permits for the Proposed Project.

### 2.2 PROJECT LOCATION

The Pleasant Grove Canal is located approximately 5.4 miles west of the City of Lincoln in southwest Placer County off of Auburn Ravine (**Figure 1**). The project site is located on Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian. The centroid of the project site is 38°51'29" North and 121°23'10" West. A topographic map and an aerial photograph of the project site are provided in **Figures 2** and **3**, respectively.

### 2.3 PROJECT OBJECTIVES

The Lead Agency has identified the following objectives for the Proposed Project:

- protect fish from entrapment, and
- improve migration corridors along Auburn Ravine.

### 2.4 PROPOSED PROJECT

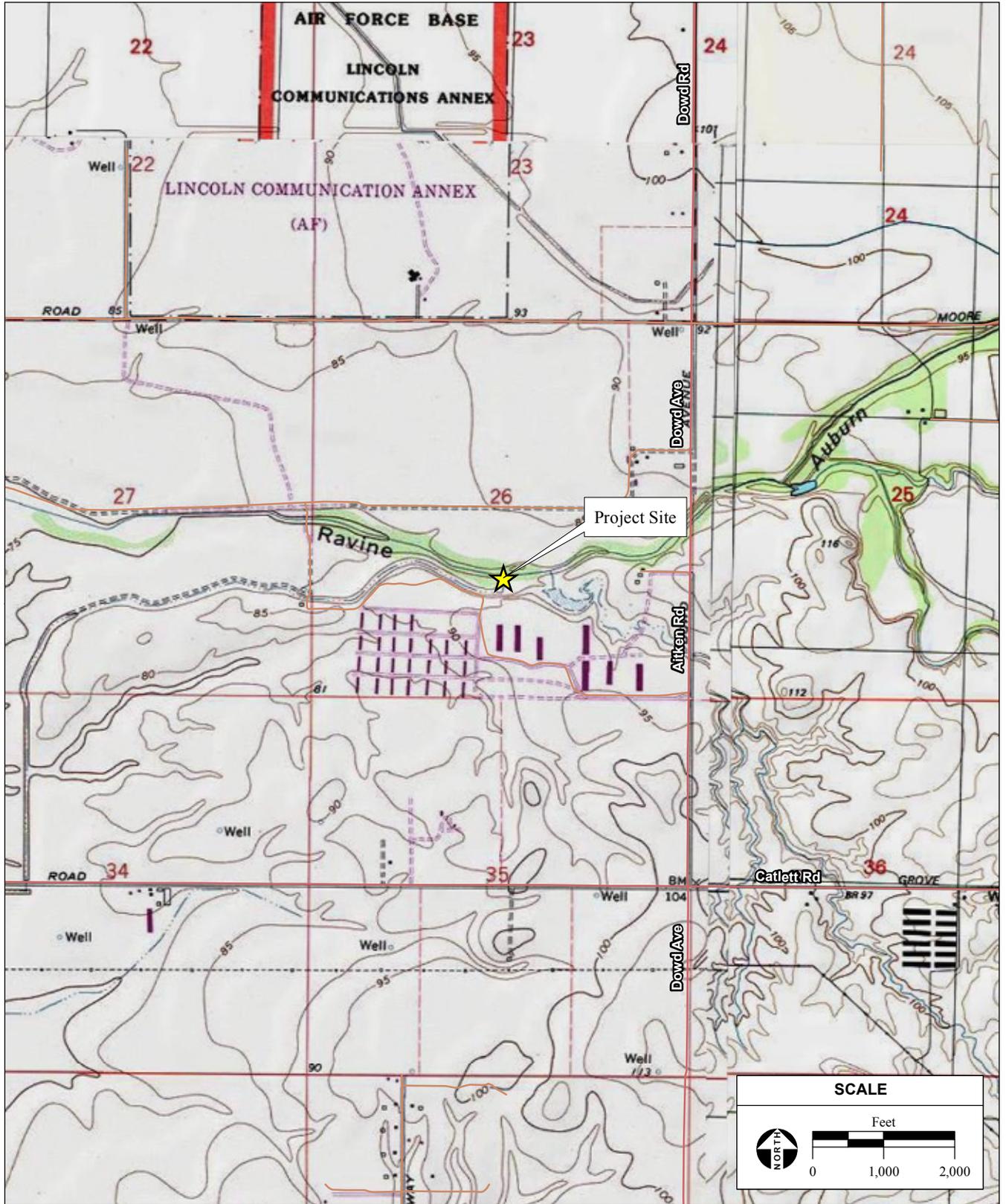
The Proposed Project is to install two cone fish screens adjacent to one another at the mouth of Pleasant Grove canal where it branches off from Auburn Ravine. Sheet-pile will block the entrance to the canal behind the screens, allowing screened water to passively enter the canal. In addition, power lines will be installed to provide electricity to the self-cleaning fish screens. These project components are discussed in detail, below.



SOURCE: StreetMap North America, 2009; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

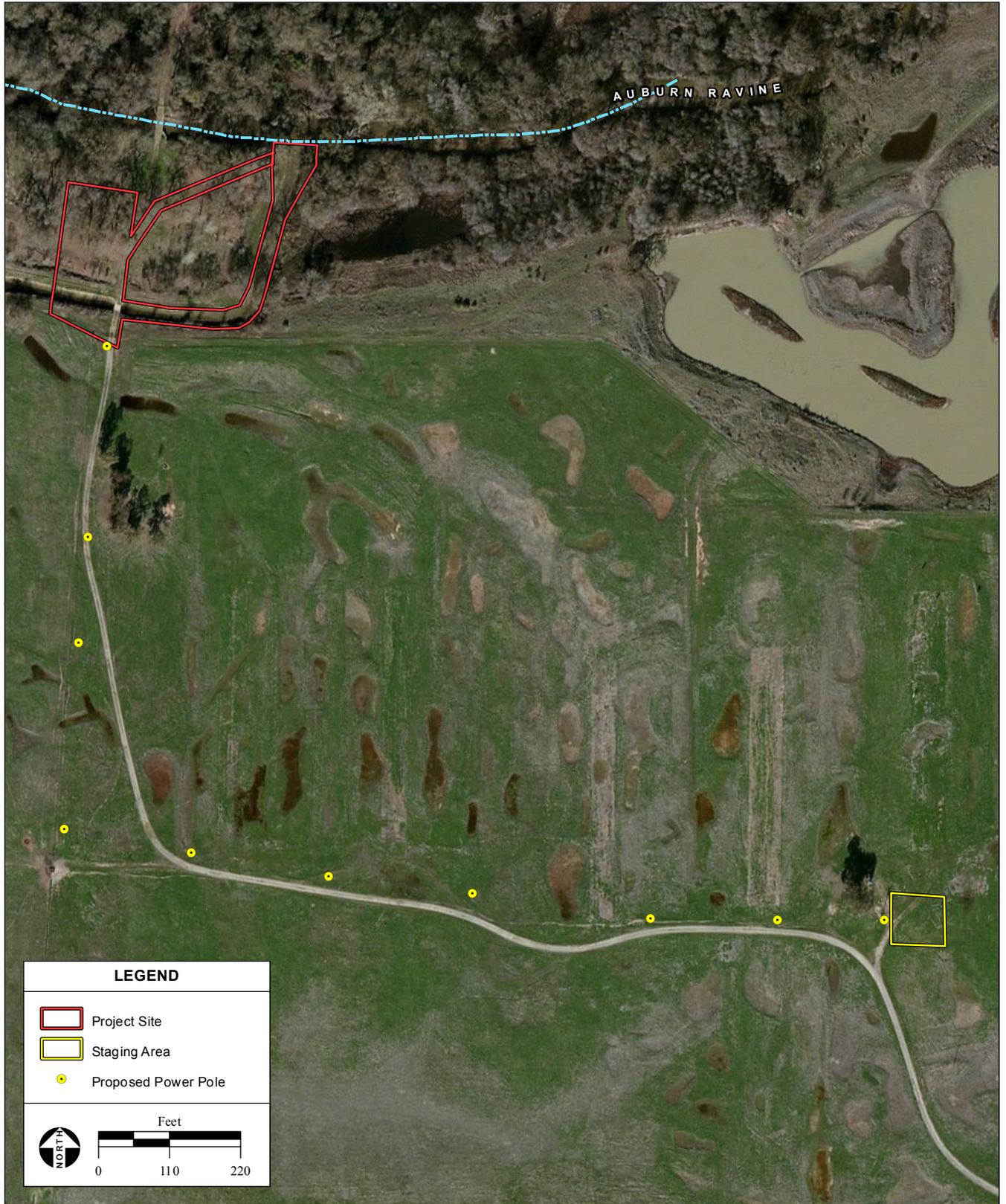
**Figure 1**  
Regional Location



SOURCE: "Pleasant Grove, CA" USGS 7.5 Minute Topographic Quadrangle, T12N R5E, Section 26, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 2**  
Site and Vicinity



SOURCE: ISI Intake Screens, Inc. 10/17/2012;  
USDA NAIP Aerial Photograph, 2/2/2012; AES, 2014

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 3**  
Aerial Photograph

## **Project Components**

The self-cleaning fish screens will be 14-foot diameter cone screens placed adjacent to each other on two screen bases. The screen bases will be supported by five 8-inch round pipe piles. The base of the screen will be placed at or just above the current sandy creek bottom, so that at the lowest water levels the screen will be submerged about three feet deep with the top of the screen just out of water.

Sheet-pile will be used to dam the canal behind the screens and prevent unscreened water from entering the Pleasant Grove Canal. Pipes will be installed underneath the sheet-pile connecting the fish screens to the canal on the other side. Water will passively enter the Pleasant Grove Canal.

The proposed project design is provided in **Figure 4**.

## **Fish Screen Description**

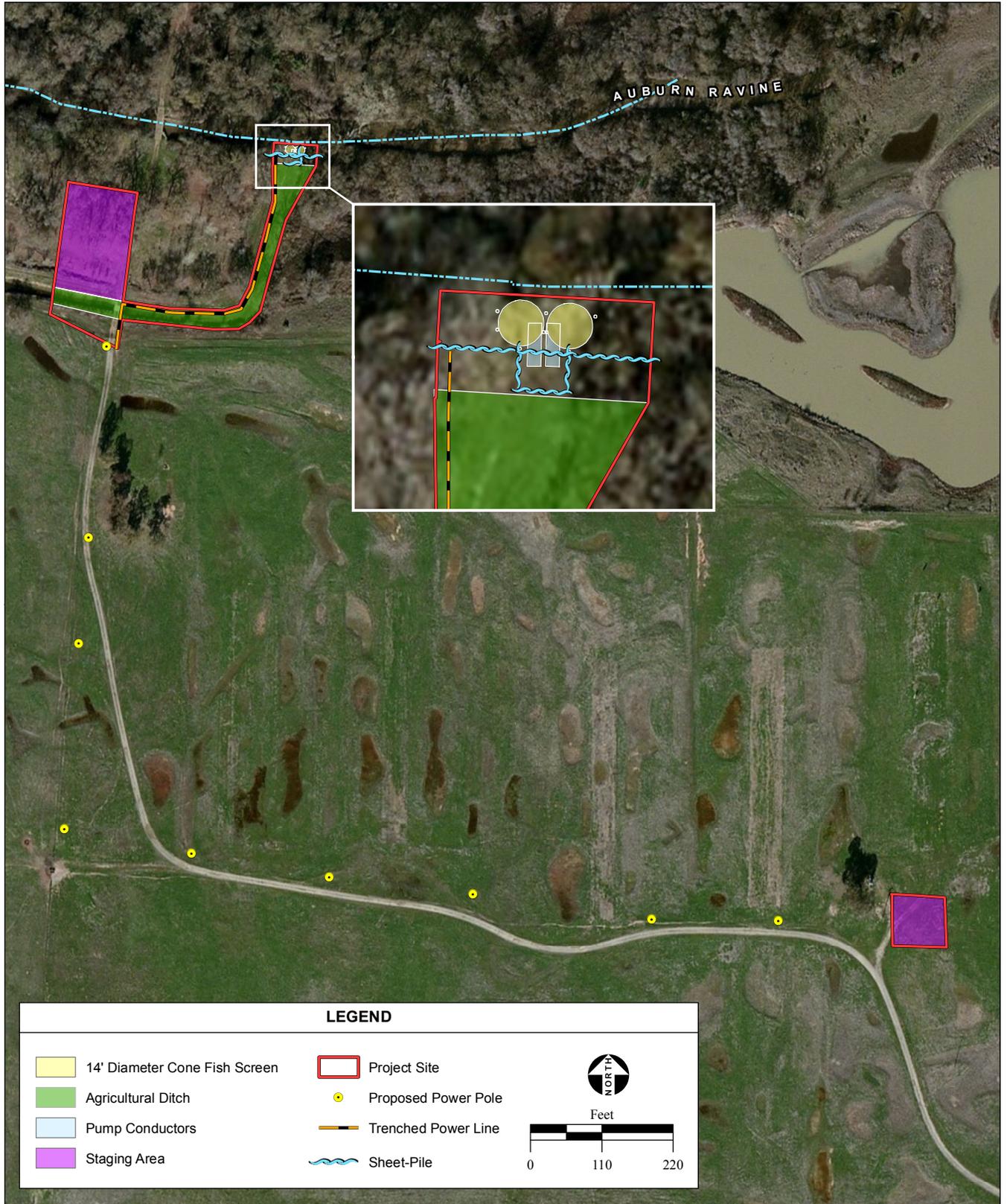
Two 14-foot diameter, cone shaped fish screens with self-cleaning brush cleaners will be placed at the existing intake canal entrance. Each screen will be placed on a 15-foot by 15-foot pile-supported steel base and connected to a 4-foot diameter culvert pipe to convey the screened water into the canal. A sheetpile headwall driven across the canal entrance will separate the canal from the Auburn Ravine. The two culvert pipes from the screens will pass through this sheetpile wall and discharge as shown on the plans. The screened pipes will discharge into a common outfall area behind the sheetpile wall to dissipate the pipe velocity before flowing into the unlined canal ditch.

A minimum area of 240 square feet of screen area must be provided to meet the fish screen velocity criteria of 0.33 feet per second. The two cones will provide approximately 280 square feet of screen surface when they are located in 2.5 feet of water. If the screen is fully submerged, or in at least 4 feet of water depth, there will be about 360 square feet of surface area available. The base of the screen will be placed just above the current sandy river bottom elevation, which is about the current intake channel invert elevation. The large surface area is necessary to reduce headlosses so the canal can achieve its full gravity diversion capability when necessary.

The existing canal entrance will be widened to place the screens as shown on the plans. The river and canal bank slopes will be excavated down to the existing river bed elevation for this. Additional excavations will also be necessary to place the screen bases and pipes. To reduce impacts to water quality and turbidity, excavation will occur when the flashboard dam is removed and flows in Auburn Ravine are minimal.

A silt curtain or temporary barrier will be placed at the canal entrance to isolate the canal from the main river during the culvert and screen site installation and prevent turbidity or water quality issues in Auburn Ravine. This barrier will not be designed to prevent seepage or to dewater the canal as the culverts will likely be dug in the wet.

The screen's pile supported bases will be supported by five, eight-inch diameter piles. Each pile



SOURCE: ISI Intake Screens, Inc. 10/17/2012;  
 USDA NAIP Aerial Photograph, 2/2/2012; AES, 2014

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 4**  
 Project Design

will be driven about 20 feet or to refusal. The base will be clamped and bolted to these piles at the proper elevation. A sheet pile wall will be driven about 20-feet deep and may be up to 60 feet of wall. The sheet pile wall will be driven in the dry, alleviating any sound impacts associated with being driven in the water. It is expected to take less than 3 days to drive all pilings and sheet pile walls. The sheet pile walls will be a PZ 22 or PZ 27 or equal. The sheetpile headwall will also be driven into the canal bottom about twice as deep as it is tall. A walkway may be provided on top of the sheetpiles for better access to the screen area.

When the screens are installed and operational, screen access will be via the existing embankment road along the intake canal. The screens will be designed to be in-place year round; however, a crane or long reach excavator can be used to remove the screens if desired or if necessary.

The screen's brush cleaning system is operated by a hydraulic power system. A hydraulic power unit will be placed in an outdoor cabinet near the intake site and located above the the flood elevation. Hydraulic hoses will be laid in a conduit along access road and to each screen unit.

All design work will be reviewed and approved by MBK Engineers. The screens, bases, sheetpile walls, and other features will be designed for the expected river loads, erosive forces, and possible debris impacts.

A silt curtain or temporary barrier will be placed at the channel entrance during the screen installation to isolate the channel from Auburn Ravine to prevent turbidity or water quality issues. The barrier will not be designed to prevent seepage or to dewater the canal, as culverts will likely be dug in the wet.

### **Power Supply**

Power will be supplied to the project site by Pacific Gas & Electric (PG&E). Power lines will be located along the existing access road that runs through the Wildlands, Inc. property to the south of the project site. Nine fiberglass power poles will be installed along the road, sited to avoid impacting wetlands and vernal pools in the area. From the northernmost power pole, where the PG&E meter and termination point is located, a power line will be trenched along the Pleasant Grove Canal's existing access road to the proposed fish screen site.

Construction activities include installation of a new 12 kV line supported by nine new fiberglass poles approximately 50 feet long and 2 feet in diameter. The new 12 kV line will support 120/240 volt, single phase, 200 amp service. The poles will be installed approximately 7 feet deep. Five anchors will also be installed. Each anchor is located approximately 15 feet from the base of the pole. Temporary work areas for each pole are anticipated to be 5 foot in diameter. The underground installation will require a trench approximately 40 inches deep, 2 feet wide, and 120 feet long. Once the cable is installed, the trench will be filled with native spoils and returned to pre-construction contours.

## **Staging Areas and Site Access**

Two staging areas will be located within the project site to facilitate construction of the Proposed Project (**Figure 4**). The PG&E staging area, located in the southeastern portion of the project site, will be used by the PG&E crew to install the power lines and poles. The second staging area in the northwest corner of the project site will be used by the general contractor to access the canal and install the fish screens.

During the construction and operation phases of the project, the project site will be accessed via the existing roads along the canal. Although the screen unit will be designed to be in-place year round, a crane or long reach excavator can remove the screen if necessary.

No materials are expected to be stored on-site except during the installation period. All materials will be delivered to SSWD as the installation progresses.

### **2.4.1 CONSTRUCTION ACTIVITIES**

Project components would be designed and constructed in accordance with applicable CDFW provisions. Components of the Proposed Project would require general construction activities including excavating, trenching, pipe installation, and placement of backfill. Some excavation within Auburn Ravine may be necessary to place the base of the screen at the desired elevation. Energy efficient construction equipment would be utilized to the extent feasible. The following equipment may be utilized during construction of the project:

- Trench Shields
- Backhoe Loader
- Rubber Tire Line Trucks
- Augers
- Bucket Trucks
- Flat-back delivery truck
- Welding trucks
- Crane

### **2.4.2 OPERATION AND MAINTENANCE ACTIVITIES**

Activities associated with maintenance of the proposed facilities may include repair or replacement of fish screen, pipes, and sheet-pile.

## **2.5 PERMITS AND APPROVALS NEEDED**

The SSWD is the lead agency under CEQA with the primary authority for project approval. In addition, the following responsible, trustee, and federal agencies may have jurisdiction over some or the entire proposed project:

### **SOUTH SUTTER WATER DISTRICT**

- Adoption of this Initial Study/Negative Declaration under the requirements of the California Environmental Quality Act (CEQA).
- Adoption of a Mitigation Monitoring and Reporting Plan that incorporates the mitigation

measures identified in this document.

### **CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

- California Endangered Species Act (CESA) compliance, including incidental take permits.
- Issuance of a Streambed Alteration Agreement (SAA).

### **REGIONAL WATER QUALITY CONTROL BOARD**

- Regional Water Quality Control Board (RWQCB) Clean Water Act Section 401 Water Quality Certification.
- Approval for coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit.

### **U.S. ARMY CORPS OF ENGINEERS**

- Clean Water Act Section 404 Permit from U.S. Army Corps of Engineers.

### **U.S. FISH AND WILDLIFE SERVICE**

- Consultation pursuant to Section 7 of the Federal Endangered Species Act (FESA) regarding potential impacts to Federally-listed special status species resulting from the Proposed Project.

### **NATIONAL MARINE FISHERIES SERVICE**

- Consultation pursuant to Section 7 of the Federal Endangered Species Act (FESA) regarding potential impacts to Federally-listed special status species resulting from the Proposed Project.

### 3.0 EVALUATION OF ENVIRONMENTAL IMPACTS

Pursuant to California Environmental Quality Act (CEQA) *Guidelines* Section 15063, an initial study (IS) should provide the lead agency with sufficient information to determine whether to prepare an environmental impact report (EIR) or negative declaration (ND) for a proposed project. The CEQA *Guidelines* state that an IS may identify environmental impacts by use of a checklist, matrix, or other method, provided that conclusions are briefly explained and supported by relevant evidence. If it is determined that a particular physical impact to the environment could occur, then the checklist must indicate whether the impact is Potentially Significant, Less Than Significant with Mitigation, or Less Than Significant. Findings of No Impact for issues that can be demonstrated not to apply to a proposed project do not require further discussion.

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

#### **Environmental Setting**

The Proposed Project area is located on Auburn Ravine, approximately 4.5 miles west of California State Route 65 (SR-65). The surrounding area is composed of agricultural lands. The project site is accessed from one of two county roads (Catlett Road and Moore Road) that extend east/west from the highway and approximately parallel to Auburn Ravine. There is an existing access road and private bridge that cross the ravine.

## **Impact Discussion**

### **Questions A and B**

There are no scenic vistas or scenic resources located within the project area that have the potential to be impacted by the Proposed Project. There are no scenic highways designated in Placer County that are located in proximity to the project site. Therefore, the Proposed Project would not have an adverse effect on a scenic vista or substantially damage a scenic resource. **No impact.**

### **Question C**

Impacts to visual resources during the construction phase of the Proposed Project would be temporary. The proposed fish screen would be installed so that it is just out of water at low flow events, but would remain under water at normal flow. The sheet-pile would replace the existing flashboards that are installed at the project site. Given the features of the project, it is not considered significantly visually intrusive to the existing project area and is not considered to be a significant environmental impact. **Less than significant impact.**

### **Question D**

The components of the Proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact |
|--|--------------------------------|---|------------------------------|-----------|
|--|--------------------------------|---|------------------------------|-----------|

## 2. AGRICULTURE AND FORESTRY RESOURCES

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

|  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### Environmental Setting

The Proposed Project is located 4.5 miles west of SR-65. The surrounding area is composed of agricultural land, timberland, and open space. Although the area surrounding the project site is designated as Prime Farmland, Unique Farmland, and Farmland of Local Importance, the site itself is riparian in nature and is not farmed (CDC, 2010). The area surrounding the project site is designated under the Williamson Act as prime farmland, unique farmland, or farmland of local importance (CDC, 2013).

There are no timberlands within the vicinity of the project site. The installation of the Proposed Project will facilitate the ongoing operation of the existing diversion in compliance with the State and Federal Endangered Species Act (ESA), and will therefore help to maintain the existing agricultural use of the lands in the vicinity of the project.

## **Regulatory Setting**

### **Farmland Mapping and Monitoring Program**

The U.S. Department of Agriculture (USDA) and the California Department of Conservation (CDC) have become involved with analyzing farmland losses. In 1975, the USDA Soil Conservation Service (SCS) began a mapping program to produce agricultural resource maps based on soil quality and land use across the nation; this now falls under the jurisdiction of the Natural Resources Conservation Service (NRCS). In 1982, the State of California created the Farmland Mapping and Monitoring Program (FMMP) within the CDC to carry on the mapping activity from the USDA-SCS on a continuing basis (CDC, 2007). The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status and is usually based on information obtained from aerial photographs and data from the NRCS.

### **Williamson Act**

The California Legislature passed the California Land Conservation Act (commonly referred to as the "Williamson Act") in 1965 to preserve agricultural lands and open space by discouraging premature and unnecessary conversion to urban uses. Under the Williamson Act, private landowners contract with counties and cities to voluntarily restrict privately-owned land to agricultural and compatible open-space uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than their potential market value. The vehicle for these agreements is a rolling-term, ten-year contract that is automatically renewed unless either party files a "notice of nonrenewal."

## **Impact Discussion**

### **Questions A and B**

As discussed above, the land within the Proposed Project area is a riparian corridor, and although it is designated as Prime Farmland, Unique Farmland, or Farmland of Local Importance by the FMMP, it is not farmable land. The area where the power poles would be installed is a vernal pool grassland that is not currently farmed and is in a conservation easement. Although the surrounding areas are under Williamson Act contracts, the riparian area and vernal pool area to the south of the project site are not farmed or farmable. Implementation of the Proposed Project would not involved changes which would result in the conversion of farmland to non-agricultural use or conflict with existing zoning for agricultural use. As noted above, the installation of the fish screen would maintain exiting water diversions

and would ensure continued farming within the South Sutter Water District (SSWD) service area at today's levels. **Less than significant. impact.**

**Questions C and D**

As discussed above, the land within the project area is not designated as timber or forestry land; therefore, no impact to timber resources would be caused directly or indirectly by the construction of the Proposed Project. **No impact.**

**Question E**

The Proposed Project would ensure continued diversions through the existing Pleasant Grove Canal, which would support agricultural operations in the area. Therefore, the Proposed Project will ensure water availability to the lands designated as Prime Farmland and other important agricultural lands in the vicinity of the project site. **No impact.**

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|  | Potentially<br>Significant<br>Impact | Less-Than-<br>Significant<br>with<br>Mitigation<br>Incorporation | Less-Than-<br>Significant<br>Impact | No<br>Impact |
|--|--------------------------------------|--|-------------------------------------|--------------|
|--|--------------------------------------|--|-------------------------------------|--------------|

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**3. AIR QUALITY**

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

|  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Expose sensitive receptors to substantial pollutant concentrations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

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## Environmental Setting

The Proposed Project is located within a portion of the Sacramento Valley Air Basin (SVAB) that is under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). The SVAB is generally affected by regionally high pollution emissions.

Air quality in the area is a function of the criteria air pollutants emitted locally, the existing regional ambient air quality, and the meteorological and topographic factors that influence the intrusion of pollutants into the area from sources outside the immediate vicinity.

## **Sensitive Receptors**

Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality related health problems. Residential areas are considered sensitive to poor air quality, because people usually stay home for extended periods of time, increasing the potential exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

The nearest sensitive receptor to the Proposed Project is a residence located approximately 2,600 feet northeast of the project site.

## Regulatory Setting

The 1977, the Federal Clean Air Act (CAA) required the United States Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six “criteria” air pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), respirable particulate matter (PM<sub>10</sub>), and lead. Pursuant to the 1990 CAA Amendments, the EPA has classified air basins (or portions thereof) as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved. Under the NAAQS, Placer County is currently designated a nonattainment area for 8-hour O<sub>3</sub> and is designated attainment or unclassified for all other criteria pollutants. **Table 1** shows the NAAQS for 8-hour O<sub>3</sub>.

**TABLE 1: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS**

| <b>Pollutant</b> | <b>Averaging Time</b> | <b>CAAQS</b>         | <b>NAAQS</b> |
|------------------|-----------------------|----------------------|--------------|
| O <sub>3</sub>   | 1-hour                | 0.09 ppm             | N/A          |
|                  | 8-hour                | 0.070 ppm            | 0.075 ppum   |
| PM <sub>10</sub> | Annual Average        | 20 µg/m <sup>3</sup> | N/A          |
|                  | 24-hour               | 50 µg/m <sup>3</sup> | N/A          |

ppm = parts per million by volume; µg/m<sup>3</sup> = microgram per cubic meter; N/A = not applicable.  
Source: CARB, 2012.

The California Air Resources Board (CARB) regulates mobile emissions sources and oversees the activities of local Air Pollution Control Districts (APCDs) and regional Air Quality Management Districts (AQMDs). CARB regulates local air quality indirectly through the California Ambient Air Quality Standards (CAAQS) and vehicle emission standards by conducting research activities, and through its planning and coordinating activities.

California has adopted ambient standards that are more stringent than the Federal standards for the criteria air pollutants. Under the California Clean Air Act, patterned after the Federal CAA, areas have been designated as attainment or non-attainment with respect to CAAQS. Under the CAAQS, Placer County is designated as a non-attainment area for 1- and 8-hour O<sub>3</sub> and nonattainment for PM<sub>10</sub>. **Table 1** shows the CAAQS for PM<sub>10</sub>, 1-, and 8-hour O<sub>3</sub>.

### Ozone (O<sub>3</sub>)

O<sub>3</sub> is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere. Through a complex series of photochemical reactions, in the presence of strong sunlight and ozone precursors (nitrogen oxides [NO<sub>x</sub>] and reactive organic gases [ROG]), O<sub>3</sub> is created. Motor vehicles are a major source of O<sub>3</sub> precursors. O<sub>3</sub> causes eye and respiratory irritation, reduces resistance to lung infection, and may aggravate pulmonary conditions in persons with lung disease.

### Particulate Matter

Particle pollution is a mixture of microscopic solids and liquid droplets suspended in air. This pollution, also known as particulate matter, is made up of a number of components, including acids (e.g. nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (e.g. fragments of pollen or mold spores). The size of particles is directly linked to their potential for causing health problems. Particles less than 10 micrometers (µm) in diameter (PM<sub>10</sub>) but greater than 2.5 µm pose the greatest problems, because they can be inhaled deep into the lungs. Exposure to such particles can affect respiratory system function.

## **PCAPCD Regulations**

The PCAPCD has adopted rules to regulate the emission of air pollutants of concern. Rule 228, Fugitive Dust, Section 400, establishes standards to be met by activities generating fugitive dust. Applicable rules are discussed below:

401.2 The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.

- 401.3 Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
- 401.5 Construction vehicles leaving the site must be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off site.
- 402 A person shall take actions such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

## **Impact Discussion**

### **Questions A, B, and C**

Potential air quality impacts associated with the Proposed Project are limited to those resulting from short-term construction activities involved with development of the project. The PCAPCD provides construction and operational significance thresholds for criteria pollutants designated as non-attainment of 82 pounds per day of ROG and NO<sub>x</sub> (ozone precursors) and PM<sub>10</sub>. Therefore, for this analysis a significant impact would occur if construction or operational project-related ROG, NO<sub>x</sub>, or PM<sub>10</sub> emissions exceeded 82 pounds per day.

ROG and NO<sub>x</sub> emissions are estimated to be 2.54 and 19.95 pounds per day, respectively. PM<sub>10</sub> emissions were estimated at 0.63 pounds per day from equipment exhaust. Due to the Proposed Project being constructed within the stream bed, fugitive PM<sub>10</sub> emission would be insignificant compared to projects constructed on dry land. Therefore, project related construction emission would not exceed the PCAPCD significance threshold. The following assumptions, reduction measures, and emission factors were used to estimate project-related emissions:

- Construction of the barriers and fish screens would occur over a 60 day period;
- OFFROAD2007 emission factors were used to estimate construction emissions;
- Construction equipment was conservatively estimated to include one crane and one excavator, four (4) haul or construction trucks (flat-bed delivery, welding, dump, etc.) and 10 worker vehicles. Construction equipment will include the following:
  - Two (2) trucks per day would mobilize material to the site and set up equipment over two (2) days;
  - One (1) excavator would be used to install electrical trench, set cone bases, install sheetpile and piles, stabilize side slopes, over the course of eleven (11) days;
  - Two (2) trucks to demobilize and remove all materials from the site over two (2) days;
- Workers would travel 25 miles one-way per day;

- Haul and construction trucks would travel 400 miles per day;
- Vegetation removal would be minimized, and no more than one (1) tree would be removed;
- Any vegetation removed will be restored following construction;
- Emission factors were based on construction year 2014.

In addition, construction of the Proposed Project would be required to comply with all rules and regulations established by the PCAPCD, including Rule 228 for Fugitive Dust. **Mitigation Measure BR-1** requires inspecting and hosing down all trucks leaving the site in order to prevent the spread of invasive plant species; this measure also satisfies the requirements of Rule 401.5. **Mitigation Measure BR-6** ensures that the disturbed area will be revegetated with a cover crop and native vegetation similar to what was impacted, which will stabilize the area and prevent wind-driven dust in order to satisfy Rule 402.

Operation of the Proposed Project would include periodic vehicle trips by the maintenance staff and maintenance equipment that would emit far less ROG, NO<sub>x</sub>, and PM<sub>10</sub> than emitted during construction given the scale of the project. Air quality impacts are considered less than significant. **Less than significant impact.**

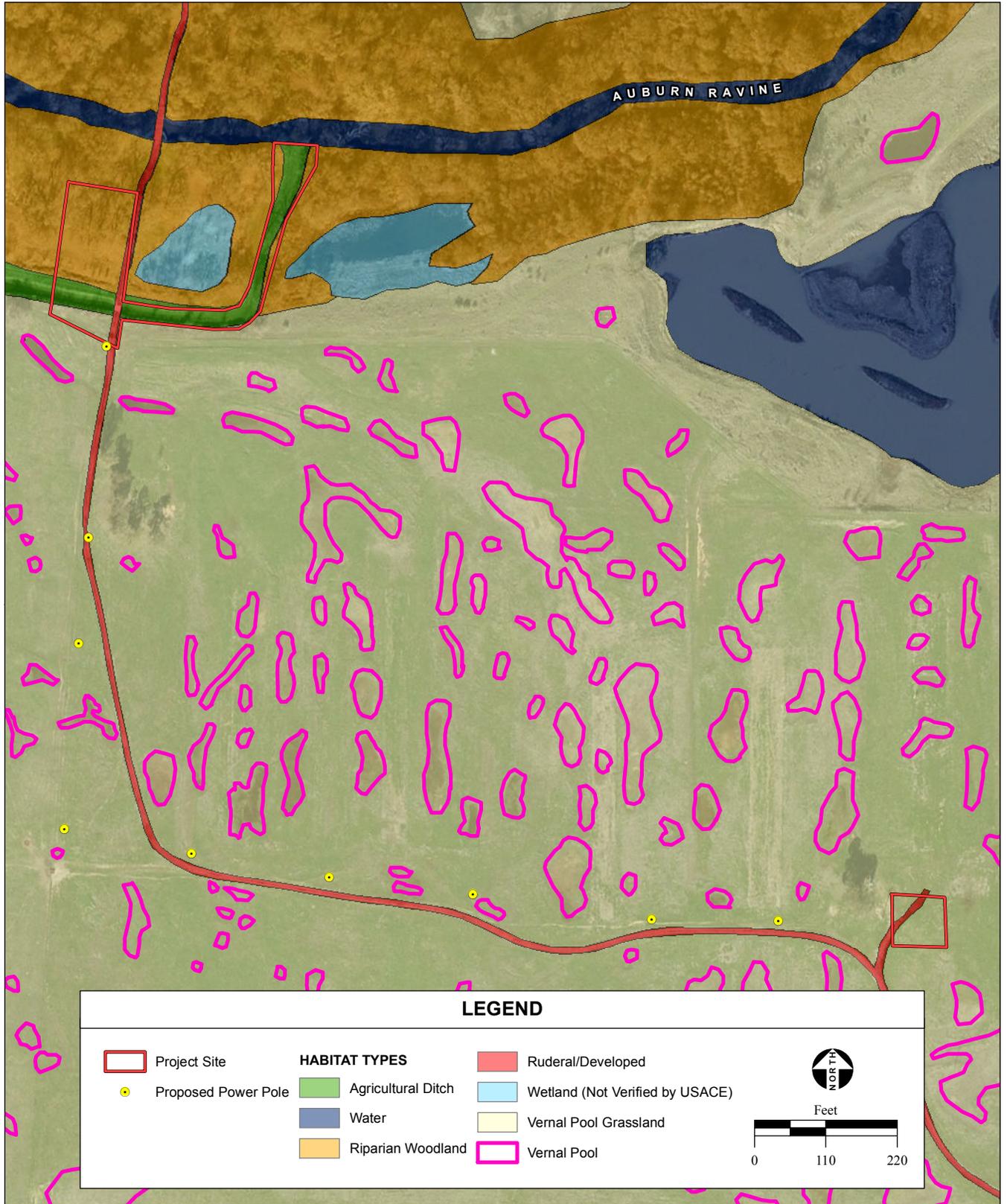
### **Questions D and E**

The nearest sensitive receptor is approximately 2,600 feet northeast of the project site; substantial concentrations of air pollutants, including diesel particulate matter from construction equipment, would not be present at that distance. Construction equipment has the potential to emit odor in the vicinity of the project site. Generally construction odors are not detected beyond the project boundaries. Given the agricultural nature of the surrounding land use and the distance to the nearest sensitive receptor, construction-related odors would not affect a substantial number of people. Substantial concentrations of air pollutants and odor impacts are considered no impact. **No impact.**

|   | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|---|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>4. BIOLOGICAL RESOURCES</b>  |                                |   |                                     |                                     |
| Would the project:  |                                |   |                                     |                                     |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?                       | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### **Environmental Setting**

Elevations within the project site are approximately 84 feet above mean sea level (msl). The project site consists of the entrance of the existing canal at Auburn Ravine, the project staging areas above the canal and along the access road, and power pole locations along the access road. Habitats in the vicinity of the project site include open water (the Auburn Ravine), ruderal/developed (the access road), riparian woodland, agricultural ditch (Pleasant Grove Canal), wetlands, and vernal pool grassland. Nearby habitat includes agriculture. A habitat map of the project site is shown in **Figure 5**.



SOURCE: ISI Intake Screens, Inc. 10/17/2012;  
USDA NAIP Aerial Photograph, 2/2/2012; AES, 2014

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**Figure 5**  
Habitat Types

Riparian woodland is a biologically rich habitat adapted to the natural processes of the riparian zone (RCIP, 2002). Dominant vegetation observed include Valley oak (*Quercus lobata*), Oregon ash (*Fraxinus latifolia*), rush (*Juncus effusus*), and box elder (*Acer negundo*). The open river channel adjacent to the project site is a National Marine Fisheries Service (NMFS)-designated critical habitat for Central Valley steelhead (*Oncorhynchus mykiss*).

## Field Survey and Analysis

An initial site visit was conducted on April 4, 2012 by Analytical Environmental Service's (AES) biologist Benjamin Barker and senior botanist Laura Burton; the results of the survey are documented in the Vascular Plants List (**Appendix A**). The general survey consisted of evaluating habitat types and documenting potential habitat for regionally occurring federally listed species identified on the U.S. Fish and Wildlife Service (USFWS) (2012), California Department of Fish and Wildlife (CDFW) (2003), and California Native Plant Society (CNPS) (2012) lists. All visible plants and wildlife were noted and identified to the lowest possible taxon necessary to determine rarity and listing status. An additional survey was conducted by AES biologist Kelly Bayne on March 13, 2013 to complete additional ground truthing of the project site.

The Regionally Occurring Special Status Species table (**Appendix B**) provides a summary of special status species in the vicinity of the project site based on the USFWS file data, the CNPS inventory, and the California Natural Diversity Database (CNDDDB) query, and provides a rationale as to whether the species has the potential to occur within the project site based on the availability of suitable habitat within the species' known range. Species requiring specific habitat not present in the vicinity of the project were eliminated from further analysis and are not discussed further.

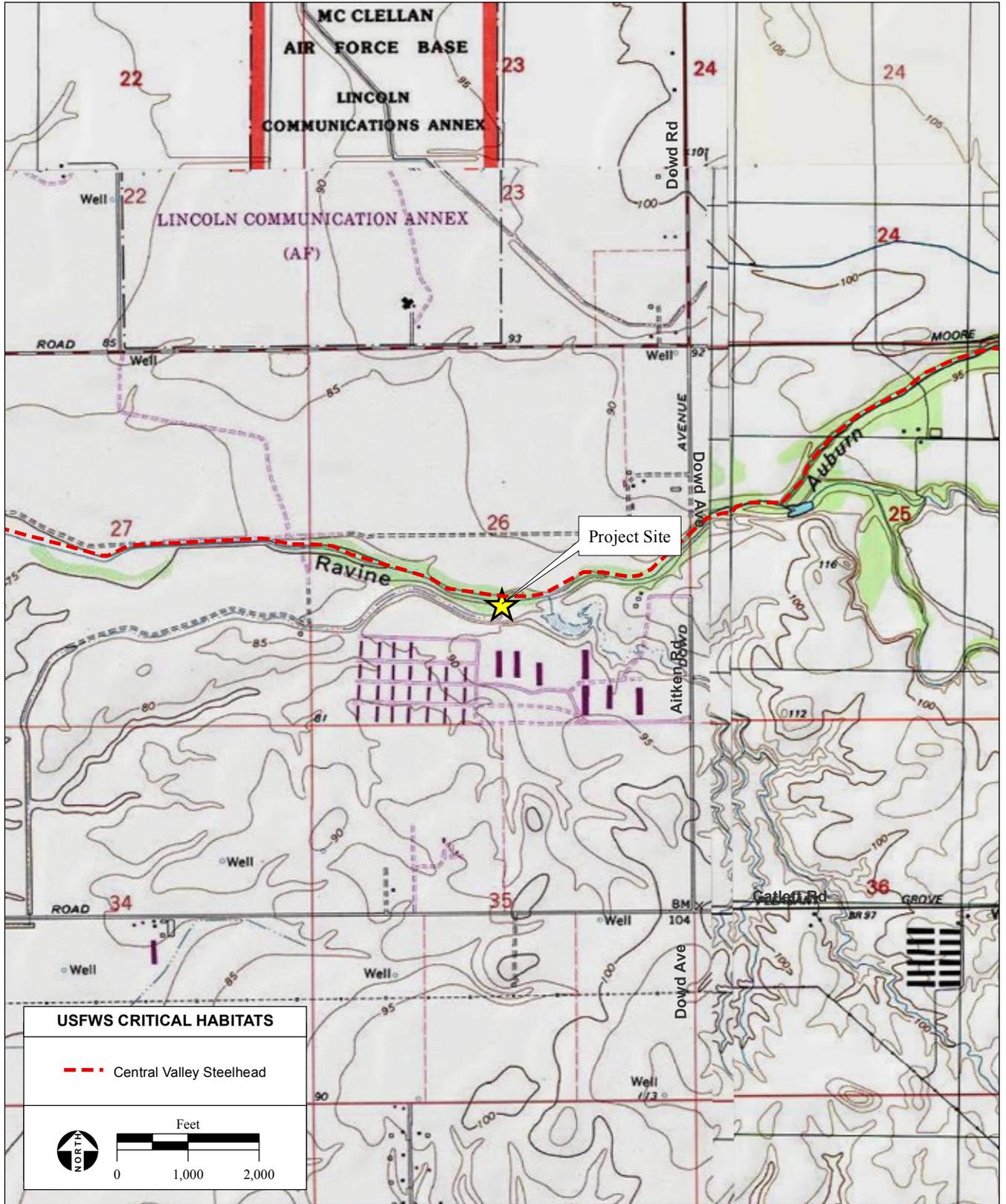
## Critical Habitat

The USFWS list identifies critical habitat for Central Valley steelhead in the Auburn Ravine on the Pleasant Grove quad. A map of critical habitat in the vicinity of the project site is illustrated on **Figure 6**.

## Special-Status Species

For the purposes of this assessment, special status has been defined to include those species that are:

- Listed as endangered or threatened under the ESA (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the CESA (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);



SOURCE: USFWS Critical Habitat Surveys, 2005; "Moulton Weir, CA" USGS 7.5 Minute Topographic Quadrangle, T17N R2W, Unsectioned Area of Larkins Childrens Rancho, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 6**  
Critical Habitats

- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as species of concern to the CDFW;
- Defined as rare or endangered under CEQA; or,
- Covered under the International Migratory Bird Treaty Act (MBTA).

Special status species with the potential to occur within the project site are discussed in detail below. The project site does not provide habitat for any State or federally listed plants, and none occur within the project site. A full list of species is provided as **Appendix B**. The site does provide habitat for the steelhead, which is federally listed as threatened. This species is discussed in detail below.

## Special Status Wildlife

### FISHES

#### Central Valley steelhead (*Oncorhynchus mykiss*)

Federal Status – Threatened

**Biology:** All steelhead hatch in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams, but some may stay in freshwater all their lives while others migrate to the ocean. The steelhead that migrate to the ocean have a slimmer profile and are more silvery in color; the steelhead that live in freshwater will be smaller and darker in color. Their diet consists of zooplankton while young, and insects, mollusks, crustaceans, fish eggs, and other small fish when adults. All steelhead adults will return to their native freshwater stream to spawn; unlike other salmonid species, the steelhead do not necessarily die after spawning and are capable of spawning more than once (NOAA, 2012a).

**Regional Distribution:** The range of the California Central Valley distinct population segment (DPS) includes the Sacramento and San Joaquin rivers and their tributaries, as well as two artificial propagation programs that include the Coleman NFH and the Feather River Hatchery (NOAA, 2012a). The Auburn Ravine is a tributary to the Sacramento River.

**Potential to Occur in the Project Site:** The project site contains migratory habitat for the steelhead. Better spawning habitats exist upstream of the project site; the Proposed Project will allow the SSWD to access screened water without impeding movement of the species through the wildlife corridor which is listed as critical habitat.

#### Chinook salmon (*Oncorhynchus tshawytscha*)

Spring run, Central Valley:  
Federal Status – Threatened  
State Status – Threatened

Winter run, Sacramento River:  
Federal Status – Endangered  
State Status – Endangered

**Biology:** Chinook salmon hatch in gravel-bottomed, fast-flowing, well-oxygenated rivers and streams, and then migrate to the ocean. Chinook salmon are very similar in appearance to

coho salmon (*Oncorhynchus kisutch*), but are larger and have small black spots on their tails. Their diet consists of terrestrial and aquatic, amphipods, and crustaceans insects while young, and primarily other fishes when adults. All Chinook salmon return to their native freshwater streams to spawn after two to four years at sea; they spawn only once and then die (NOAA, 2012b).

**Regional Distribution:** Two evolutionarily distinct units (ESUs) may occur within the vicinity of the project site. The Sacramento River winter run, a federally endangered ESU, occurs along the Sacramento River and its tributaries. The Central Valley spring run, a federally threatened ESU, also occurs along the Sacramento River and its tributaries (NOAA, 2012b).

**Potential to Occur in the Project Site:** The project site provides poor habitat for the Chinook salmon, but they may become entrapped in the diversion channel in its existing configuration. The Proposed Project will allow the Colusa Indian Community Council to access screened water without impeding movement of the species through the Sacramento River wildlife corridor to spawning habitat upstream.

## BIRDS

### Swainson's hawk (*Buteo swainsoni*)

Federal Status – None

State Status – Threatened

**Biology:** Swainson's hawks arrive to their breeding grounds in the Central Valley in early March. They often nest peripherally to valley riparian systems as well as utilizing lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood, walnut, and large willow trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley (CDFW, 2003). Breeding pairs immediately construct nests then lay eggs from mid- to late-April. The eggs are incubated into mid-May when young begin to hatch. Nesting occurs from March 1 to August 31. Typical foraging habitat includes annual grasslands, alfalfa, and other dry farm crops that provide suitable habitat for small mammals. Suitable foraging habitat nearby nesting sites is critical for fledgling success.

**Regional Distribution:** In California, Swainson's hawk breeds in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding is reported from Lanfair Valley, Owens Valley, Fish Lake Valley, Antelope Valley, and in eastern San Luis Obispo County.

**Potential to Occur in the Project Site:** There are documented CNDDDB occurrences within a five-mile radius of the project sites. The nearest occurrence to the project site is approximately one mile northeast. The Swainson's hawk may occur in the riparian forest habitat that will be used as temporary staging areas, but the species will not utilize the Auburn Ravine area that will be permanently impacted by the Proposed Project.

## **Regulatory Setting**

### **California Department of Fish and Wildlife**

California Fish and Game Code sections 3503 and 3503.5 provide for the protection of birds and birds' nests by prohibiting the take of birds, their nests, or their eggs.

### **Wetlands and Waters**

Any person, firm, or agency planning to alter or work in navigable waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE). Permits, licenses, variances, or similar authorization may also be required by other federal, State, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from the USACE (33 U.S.C. 403). Section 301 of the Federal Water Pollution Control Act and Amendments of 1972 (Clean Water Act (CWA)) prohibit the discharge of pollutants, including dredged or fill material, into waters of the U.S. without a Section 404 permit from USACE (33 U.S.C. 1344). State Water Quality Certification may be required by the Central Valley Regional Water Quality Control Board (RWQCB) before other permits are issued. California Fish and Game Code Section 1602 governs construction activities that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the CDFW. Under Section 1602, State and local public agencies must obtain a discretionary Streambed Alteration Agreement (SAA) from the CDFW prior to the initiation of construction activities within lands under CDFW jurisdiction.

### **Migratory Bird Treaty Act**

Migratory birds are protected under the federal MBTA of 1918 (16 U.S.C 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 Code of Federal Regulations (CFR) 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. As such, project-related disturbances must be reduced or eliminated during the nesting season.

### **Placer County Conservation Plan**

The project area lies within the Placer County Conservation Plan (PCCP) area; this plan is a partnership between local, State, and federal agencies that covers specific areas in western Placer County (Placer County, 2011). Management goals of this plan include:

- Provide an effective framework to protect, enhance, and restore the natural resources of the Plan area;

- Sustain all natural communities that are currently present in the western Placer County landscape;
- Ensure population stability and sustainability of special-status species; and
- Maintain connectivity between habitats across the landscape.

The PCCP has not yet been adopted.

## **Impact Discussion**

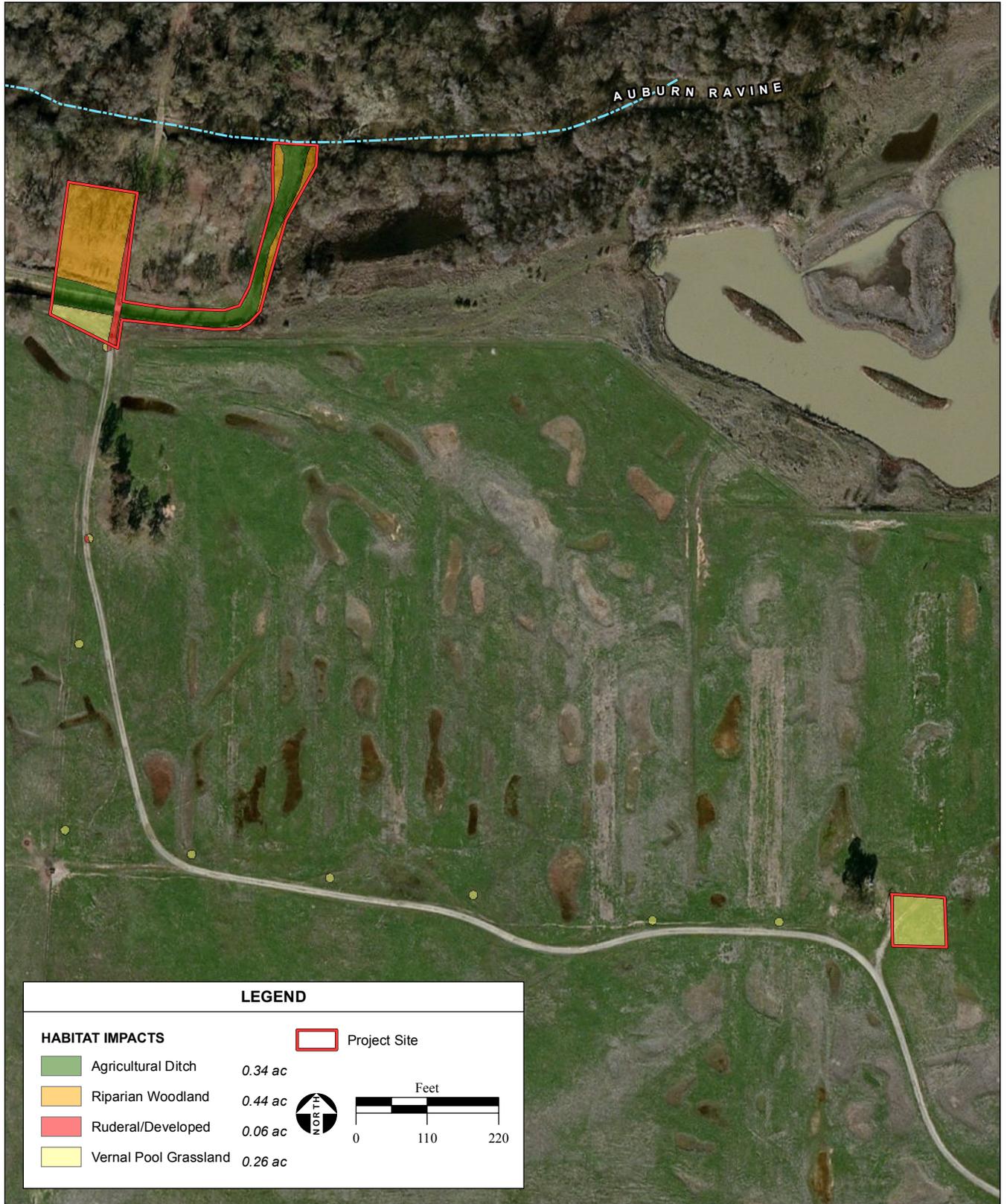
### **Question A**

The Proposed Project will screen the federally threatened Central Valley steelhead from the current impacts of the operations of this agricultural diversion, thus providing a strong likelihood of long-term improvement of its habitat. For the purposes of this assessment, impacts were calculated based on permanent direct impacts and temporary direct impacts. There are no indirect impacts to habitats in the area, as implementation of the Proposed Project will allow the surrounding agricultural fields to be farmed in their existing, baseline state. Because the project site abuts USFWS-designated habitat for the steelhead trout, construction of the Proposed Project has the potential to adversely affect this fish species. Temporary direct impacts are defined as any impacts that may occur due to disturbance of the staging areas and access corridors around the project site for construction equipment and working space. Ground disturbance resulting from trenching activities within the riparian forest are included in this area.

Impacts to nesting birds which may be using the area will be avoided using pre-construction surveys in agreement with the mitigation measures listed below. Immediately following completion of construction activities, the riparian forest would be restored to its pre-construction condition and all temporary direct impacts would cease.

The Proposed Project will permanently block steelhead from entering the diversion channel, where they may become entrained. Temporary impacts would be focused in the agricultural ditch and would avoid the critical habitat, Auburn Ravine. The diversion ditch, which would be disturbed for the installation of the fish screens, would result in the impact of approximately 0.34 acres of the agricultural ditch. Project impacts to habitat types are shown in **Figure 7**.

Pile driving has been shown to have an adverse effect on fishes, which react to sounds that are especially strong and/or intermittent low-frequency sounds (**Appendix D**). Construction activities can produce both pulsed (i.e., impact pile driving) and continuous (i.e., vibratory pile driving) sounds. NMFS-approved criteria for injury to fish from pile driving activities are 206 dB peak and 187 dB accumulated sound exposure level (SEL) for all fish greater than two grams (**Appendix D**). The vibratory hammer method of pile driving will have no greater than 192 dB peak and 177 dB accumulated SEL, and will be utilized to the fullest extent feasible based on project conditions.



SOURCE: ISI Intake Screens, Inc. 10/17/2012;  
USDA NAIP Aerial Photograph, 2/2/2012; AES, 2014

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**Figure 7**  
Project Impacts to Habitat Types

Construction activities will occur between September and November; this is outside of the nesting season for Swainson's hawk and other protected migratory birds (March 1 through August 31). Therefore, these species would not be impacted and no mitigation measures are needed.

Implementation of **Mitigation Measures BR-1 through BR-10** below would compensate for adverse affects to Central Valley steelhead by off-setting the loss of micro-habitat. Impacts to migratory birds and other special status bird species are reduce to less-than-significant levels through the implementation of preconstruction surveys required in **Mitigation Measure BR-4. Less than significant with mitigation.**

### **Question B**

As noted above, the USFWS identifies critical habitat for Central Valley steelhead within Auburn Ravine. The project site occurs within suitable habitat for this species. The existing embankment road will provide temporary access to the project site, and construction will impact 0.06 acres of ruderal/developed land along this road. Temporary impacts from the staging area include the temporary construction impacts to approximately 0.44 acres of riparian woodland and an additional 0.26 acres of vernal pool grassland where power poles will be installed (**Figure 7**). However, vegetation removal will be minimized as part of the Proposed Project; there is the possibility that one tree may be removed, which is a less-than-significant impact. In addition, no vernal pools will be impacted by installation of the power poles. Power pole locations have been carefully sited in consultation with CDFW, USFWS, and the Wildlands, Inc. mitigation bank and nature conservancy that owns the property. **Mitigation Measure BR-10**

ensures that best management practices (BMPs) would be utilized during construction to protect the vernal pools. Impacts to sensitive habitats would be less than significant with implementation of **Mitigation Measures BR-1 through BR-10. Less than significant with mitigation.**

### **Question C**

There are no jurisdictional wetlands within the construction area. The staging areas for the installation of the Proposed Project have been placed to avoid wetlands, thereby eliminating potential impacts. During operation of the Proposed Project, no impacts to wetlands would occur. **Less than significant impact.**

### **Question D**

The Proposed Project would protect the movement of native migratory fish through the USFWS-designated critical habitat. No detrimental impacts to native or migratory species would occur. **Less than significant impact.**

## Question E

The Proposed Project does not conflict with any local policies or ordinances protecting biological resources. As noted above, construction of the project does have the potential to impact steelhead habitat. Implementation of **Mitigation Measures BR-1 through BR-10** would ensure a less-than-significant impact. **Less than significant with mitigation.**

## Question F

The project site is located within the proposed Placer County Conservation Plan area, and is in keeping with the goals and policies of that plan. **No impact.**

## Mitigation Measures

- BR-1** Staging areas shall be located within designated areas along the existing access road. Temporary stockpiling of imported material shall occur only in approved construction staging areas. To reduce the potential for off-site tracking of sediment and to eliminate the spread of invasive plant species, all construction equipment will be inspected for seeds or plant parts before entering and leaving the site. If seeds or plant parts are found, the equipment will be washed in either of the staging areas.
- BR-2** Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities into potentially jurisdictional features and all appropriate and necessary BMPs shall be applied to ensure this.
- BR-3** Construction activities shall occur between the months of September and November, with all in-water work to be completed by October 15, when the number of anadromous fishes will be lowest in the Auburn Ravine.
- BR-4** A litter control program shall be instituted at the entire project site. The contractor will provide closed garbage containers for the disposal of all food-related trash items (e.g., wrappers, cans, bottles, food scraps). All garbage will be removed daily from the project site. Construction personnel will not feed or otherwise attract fish or wildlife to the construction area.
- BR-5** No canine or feline pets or firearms (except for federal, State, or local law enforcement officers and security personnel) shall be permitted at the project site to avoid harassment of, killing, or injuring wildlife.
- BR-6** To the maximum degree feasible, removal of trees over 4 inches diameter at breast height (dbh) and significant understory shrubs shall be avoided during construction and in the selection of staging areas. All activities that may disturb riparian habitat shall be done under a SAA with CDFW, and all terms of said permit shall be followed. After construction, staging areas must be returned to their original state and any impacted

riparian woodland must be replanted using native vegetation with the goal of mirroring the control area designated at an undisturbed area near the site within five years. If a SAA is issued, a mitigation monitoring plan acceptable to CDFW shall be prepared; it is anticipated that such a plan shall include a five year period of monitoring and, at a minimum, would require an 80 percent success rate by the fifth year as a performance standard.

**BR-7** Measures to reduce impacts of pile driving activities will include:

- Pile driving will occur using a vibratory hammer to the fullest extent feasible given the project site conditions at time of construction;
- Soft Start: The pile driving engineer will utilize soft-start techniques (ramp-up and dry fire) recommended by NMFS for impact and vibratory pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for 15 seconds at reduced energy followed by a one minute waiting period. This procedure will be repeated two additional times; and
- Daylight Construction: Pile driving will only be conducted between two hours post-sunrise through two hours prior to sunset (civil twilight) during the construction period. Passive evacuation of fish as described below should be used as an avoidance measure immediately prior to the first day of construction activity on the project site. Should fish species be detected during pile driving, all pile driving activities will be ceased until fish evacuate the project area. Fish shall not be captured, handled or taken. CDFW should be contacted prior to additional action to determine future procedures.

**BR-8** If the canal is dry during construction, no mitigation is needed for fish. However, if water is present in the Pleasant Grove Canal, a fish avoidance plan (**Appendix E**) may be required as a protective measure to prevent fish from becoming entrapped behind the screen during construction or installation. This plan will utilize non-contact seine-netting and low-impact sound-facilitated passive evacuation of fish prior to initiation of construction activities on the project site. Fish will be prevented from returning to the project site following these avoidance procedures. This fish avoidance plan will be approved by CDFW prior to construction as a protective measure to ensure fish survival.

**BR-9** Prior to commencement of any groundbreaking activities, Intake Screens, Inc. (ISI) will train and inform its workers to avoid all marked and sensitive areas. All workers will be advised of all permit restrictions and conditions prior to any work on the project.

**BR-10** The following measures shall be required to protect sensitive vernal pools during construction:

- If vernal pools are present within 300 feet of the proposed pole installation site, a qualified biologist will stake and flag an exclusion zone prior to work activities. The exclusion zone will provide a 250 foot buffer from the edge of the vernal pool. If an

exclusion zone cannot extend to the specified distance from the habitat, the biologist will stake and flag a restricted activity zone of the maximum practicable distance from the exclusion zone and habitat.

- This exclusion zone distance may be modified by a qualified biologist, based on site-specific topography, hydrology, and intervening features. Project activities will be prohibited or greatly restricted within restricted activity zones. However, vehicle operation on existing roads and foot travel will be permitted.
- A qualified biologist will monitor activities near flagged exclusion areas and restricted activity zones. Within 60 days after PG&E activities have been completed at the worksite, all staking and flagging will be removed.
- Any work closer than 250 feet from vernal pools will be avoided after the first significant rain until June 1, or until vernal pools remain dry for 72 hours. If work cannot be postponed to the dry season, a qualified biologist shall determine the safest route and areas within which activities can occur and a full-time monitor shall be present for all work performed in the vernal pool habitat.
- Erosion control measures will be implemented during maintenance of the power line, as necessary to prevent water quality degradation to the vernal pools. Non-ground disturbing activities (i.e. line installation, arm repair/upgrades, etc.) associated with the existing poles will be conducted either via a bucket located on a road outside of the exclusion zone, or by linemen who will walk to the site and perform the work on the top of the poles using hand tools.

|   | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact                |
|---|--------------------------------|---|------------------------------|--------------------------|
| <b>5. CULTURAL RESOURCES</b>  |                                |   |                              |                          |
| Would the project:  |                                |   |                              |                          |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?      | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>     | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5? | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>     | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?         | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>     | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                            | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>     | <input type="checkbox"/> |

### **Environmental Setting**

The Study Area is located approximately 5.4 miles west of the City of Lincoln along Auburn Ravine and its floodplain. A record search of the North Central Information Center (NCIC) at Sacramento State University for known archeological sites, conducted by Origer and Associates (**Appendix C**; 2013), has yielded no documented archeological sites or historical resources in the vicinity of the project site. The NCIC search revealed that a field survey of the project site had been conducted in 2002, which resulted in the discovery of one potential historical find, an agricultural ditch which was not further documented. There are no other recorded cultural resources within a one-mile radius (Origer, 2013). In addition, U.S. Bureau of Reclamation (Reclamation) archeologists have surveyed the project site and staging areas in support of the Section 106 consultation for the Proposed Project. No archeological sites or historical resources were discovered during Reclamation’s field surveys.

Consultation with the Native American Heritage Commission (NAHC) determined that a records search of the Sacred Lands File failed to indicate the presence of Native American cultural resources in the immediate project area (**Appendix C**; NAHC, 2012). However, the NAHC noted that the absence of specific site information in the Sacred Lands File does not indicate the absence of cultural resources in any project site, and suggested contacting 11 Native American individuals and Tribal leaders for further consultation. Letters were sent on December 31, 2012 to the 11 Native American individuals identified by the NAHC. At the time of the printing of this document, no responses have been received.

Mitigation measures are included in this document to protect any cultural resources in the event of an inadvertent discovery of those resources during construction of the Proposed Project.

## **Regulatory Setting**

### **Archeological Resources Regulatory Setting**

#### **National Historic Preservation Act**

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 CFR Part 800, require federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The significance of the resources must be evaluated using established criteria outlined 36 CFR 60.4, as described below.

If a resource is determined to be a *historic property*, Section 106 of the NHPA requires that effects of the development on the resource be determined. A historic property is:

...any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property...(NHPA Sec. 301[5])

Section 106 of the NHPA prescribes specific criteria for determining whether an undertaking would adversely affect a historic property, as defined in 36 CFR 800.5. An impact is significant when the following occurs to prehistoric or historic archaeological sites, structures, or objects that are listed, or eligible for listing, in the National Register of Historic Places (NRHP):

- physical destruction of or damage to all or part of the property;
- alteration of a property;
- removal of the property from its historic location;
- change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- neglect of a property that causes its deterioration; and
- transfer, lease, or sale of the property out of federal control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

If development will adversely affect an historic property, then prudent and feasible measures must be undertaken to avoid or reduce adverse impacts. The State Historic Preservation Officer (SHPO) should be provided with an opportunity to review and comment on these measures prior to project implementation.

## California Environmental Quality Act

CEQA requires that, for projects financed by, or requiring the discretionary approval of public agencies in California, that the effects that a project has on historical and unique archaeological resources be considered (PRC Section 21083.2). Historical resources are buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance (PRC Section 50201). The CEQA Guidelines (Section 15064.5) define three cases in which a property may qualify as a historical resource for the purpose of CEQA review:

- A. The resource appears in, or is determined eligible for the listing, in the California Register of Historical Resources (CRHR). Section 5024.1 defines eligibility requirements and states that a resource may be eligible for inclusion in the CRHR if it:
  - 1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - 2. is associated with the lives of persons important in our past;
  - 3. embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
  - 4. has yielded, or may be likely to yield, information important in prehistory or history.

Sites younger than 45 years, unless of exceptional importance, are not eligible for listing in the CRHR.

As with the NRHP, properties must retain integrity to be eligible for listing on the CRHR. Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC section 5024.1(d)(1)).

- B. The resource is included in a local register of historic resources, as defined in section 5020.1(k) of the PRC, or is identified as significant in a historical resources survey that meets the requirements of section 5024.1(g) of the PRC (unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant).
- C. The lead agency determines that the resource may be a historical resource as defined in PRC section 5020.1(j), 5024.1, or significant as supported by substantial evidence in light of the whole record.

Public Resources Code Section 21083.2 governs the treatment of unique archaeological resources, defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated" as meeting any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

### California Public Resources Code

Section 5097.5 of the PRC prohibits “knowing and willful” excavation, removal, destruction, injury, or defacement of paleontological resources on public lands without prior permission from the appropriate agency. Public lands include those “owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.” If paleontological resources are identified within a given project area, the lead agency must consider those resources when evaluating project impacts. The level of consideration may vary with the importance of the resource in question.

### **Paleontological Resources Regulatory Setting**

The California Environmental Quality Act provides protection for *unique paleontological resources* and *unique geologic features*, and requires that planners consider impacts to such resources in the project review process. The Act distinguishes between ubiquitous fossils that are of little scientific consequence, and those, which are of some importance by providing protection for the latter. While CEQA does not precisely define *unique paleontological resources*, criteria established by the Society of Vertebrate Paleontology (SVP) provide guidance. The SVP defines a significant paleontological resource as one that meets one or more of the following criteria (SVP, 1995):

- Provides important information shedding light on evolutionary trends and/or helping to relate living organisms to extinct organisms;
- provides important information regarding the development of biological communities;
- demonstrates unusual circumstances in the history of life;
- represents a rare taxon or a rare or unique occurrence, is in short supply and in danger of being destroyed or depleted;
- has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- provides important information used to correlate strata for which it may be difficult to obtain other types of age dates.

The California Environmental Quality Act similarly fails to define precisely a unique geologic feature. For the purpose of this analysis, a *unique geologic feature* is a resource or formation that:

- Is the best example locally or regionally;
- embodies distinct characteristics of a geologic principal that is exclusive locally or regionally;
- provides a key piece of geologic information important in geology or geologic history;
- is a type locality of a geologic feature;
- contains a mineral not known to occur elsewhere locally or regionally; or is a common teaching tool.

## **Impact Discussion**

### **Questions A through D**

Significant impacts to cultural resources typically occur when important sites, features, or artifacts are lost, damaged, or destroyed without appropriate mitigation such as recordation or data recovery. Displacement or destruction of these resources will result in the loss of important information and connections to past events, people and cultures. As noted above, only one undocumented cultural resource was identified as a result of the records search of the NCIC, and no other resources were located within a one-mile radius of the project site.

There is always a possibility that a significant subsurface cultural resource may exist in the project site, as archeological sites may be buried with no surface manifestation. In addition, there is a remote possibility that an unanticipated discovery of human remains could occur. With implementation of **Mitigation Measure C-1 through CR-3**, impacts to cultural resources in the case of an inadvertent discovery would be reduced to less-than-significant levels. **Less than significant with mitigation.**

## **Mitigation Measures**

**CR-1** SSWD shall require that, in the event of any inadvertent discovery of archaeological or cultural resources, all such finds shall be subject to PRC 21083.2 and CEQA *Guidelines* 15064.5. Procedures for inadvertent discovery include the following:

- All work within 50 feet of the find shall be halted until a professional archaeologist, or paleontologist if the find is of a paleontological nature, can evaluate the significance of the find in accordance with National Register of Historic Places and CRHR criteria.
- If any find is determined to be significant by the archaeologist, or paleontologist as appropriate, then representatives of SSWD shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action. If necessary, a

Treatment Plan shall be prepared by an archeologist (or paleontologist), outlining recovery of the resource, analysis, and reporting of the find. The Treatment Plan shall be submitted to SSWD for review and approval prior to resuming construction.

- All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist, or paleontologist, according to current professional standards.

**CR-2** If vertebrate fossils are discovered during project activities, all work shall cease within 100 feet of the find until a qualified professional paleontologist as defined by the SVP's Conformable Impact Mitigation Guidelines Committee (2011) can assess the nature and importance of the find and recommend appropriate treatment. The SSWD will also be notified of the discovery and the qualified professional paleontologist's opinion within 48 hours of the initial finding. Treatment may include preparation and recovery of fossil materials, so that they can be housed in an appropriate museum or university collection, and also may include preparation of a report for publication describing the finds. Project activities shall not resume until after the qualified professional paleontologist has given clearance and evidence of such clearance has been submitted to the SSWD.

**CR-3** If human remains are encountered during construction activities, work shall halt immediately in the vicinity and the Placer County Coroner should be notified in accordance with California Health and Safety Code Section 7050.5. If human remains are of Native American origin, the Coroner must, in accordance with PRC Section 5097, notify NAHC within 24 hours of this identification.

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|--|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>6. GEOLOGY AND SOILS</b>  |                                |   |                                     |                                     |
| Would the project:   |                                |   |                                     |                                     |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| i) Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines & Geology Special Publication 42. | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| ii) Strong seismic ground shaking?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| iii) Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| iv) Landslides?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## **Environmental Setting**

The project site is located in southwest Placer County. Elevations within the project site are approximately 84 feet above msl. The project area is located within the Great Valley geomorphic province of California. The Great Valley province is surrounded by the Coast Ranges to the west, the Klamath and Cascade mountain ranges to the north, and the Sierra Nevada Mountains to the east. The Great Valley geomorphic province is generally characterized by a relatively flat alluvial plain composed of deep sediment deposits.

The project site contains the soils and characteristics as detailed in **Table 2** below:

**TABLE 2: PROJECT SITE SOIL CHARACTERISTICS**

| <b>Soil Type</b>                                     | <b>Characteristics</b>  |
|--|---|
| Xerofluents, frequently flooded (194)                | Somewhat poorly drained, moderate infiltration rate when thoroughly wet, with slight susceptibility to erosion. This soil has a moderate shrink-swell potential.  |
| Alamo-Fiddymont complex, 0 to 5 percent slopes (104) | Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet, and a very slow rate of water transmission. This soil has a moderate risk of erosion and moderate to high shrink-swell potential. |

Source: NRCS, 2014

The primary seismic hazards in the project site are considered to be ground shaking and ground failure. Ground shaking occurs as energy. It is transmitted as elastic waves up through the bedrock to become a series of complex waves or oscillations in the ground surface. Such ground shaking is one of the main causes of earthquake damage. There are no known active faults near the project site, nor is the project site present within the Alquist-Priolo earthquake zone (CGS, 2012). Although the project site is located within a region of California that is considered seismically stable, earthquake activity in the neighboring Sierra Nevada and San Francisco Bay areas could affect the project site with ground shaking and liquefaction. The closest fault zone is the Bear Mountain fault zone of the Foothills Fault system on the western edge of the Sierra Nevada Ranges, approximately 12.5 miles to the northeast (**Figure 8**).

Liquefaction and landslides can increase damage from ground shaking. Liquefaction changes water-saturated soil to a semi-liquid state, removing support from foundations and causing buildings to sink. Liquefaction is determined by a number of factors, including soil type, depth to water, soil density, and the duration and intensity of ground shaking (USGS, 2008). The California Geological Survey (CGS) does not map the project site near any known liquefaction or landslide zones (CGS, 2014). The topography of the western side of Placer County is relatively flat and not subject to landslides (USGS, 2008). Based on known soil, slope, groundwater, and ground shaking conditions in the project area, the potential for landslides at the project site is considered to be low.

Expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. Expansive soils are of concern because building foundations may rise during the rainy season and fall during the dry season in response to the clay's action;



this can cause structural distortion. NRCS (2014) identifies the shrink-swell potential of the project site as moderate to high for the soils on the project site.

## **Regulatory Setting**

### **Alquist-Priolo Earthquake Fault Zoning Act**

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972; it prohibits the placement of structures intended for human occupancy from being built across active fault traces in California. The Act requires delineation of zones (Alquist-Priolo zones) along active faults in order to address seismic concerns as they relate to public safety and project design. The Act only addresses the hazards of surface fault rupture and is not intended to regulate activities relating to other earthquake hazards such as liquefaction, landslides, or tsunamis. Cities and counties are required to regulate development projects within Alquist-Priolo zones.

### **Seismic Hazards Mapping Act**

This Seismic Hazards Mapping Act requires cities, county, and local permitting agencies to regulate urbanization development and redevelopment projects within seismic hazard zones that have been delineated by the State Geologist. Before a development permit can be granted to a proposed project located near a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design.

## **Impact Discussion**

### **Question A**

The project site is not located in a fault-rupture hazard zone as designated by CGS. Primary seismic hazards for the project site are therefore considered to be ground shaking and ground failure. The Proposed Project does not include any features that would place people or structures at risk to seismic hazards or expansive soils. Potential impacts are less than significant. **Less than significant impact.**

### **Question B**

Soils underlying the project site are Xerofluvents and Alamo-Fiddymont complex soils, which have a slight to moderate potential for erosion (NRCS, 2014). The Proposed Project will disturb greater than one acre of soil, and is therefore required to file a Stormwater Pollution Prevention Plan (SWPPP) under the CWA's National Pollutant Distribution Elimination System (NPDES) permit. In accordance with the SWPPP, SAA, and 401 and 404 permits, BMPs are required in **Mitigation Measure GS-1** to ensure that erosion impacts are minimized. With the implementation of **Mitigation Measure GS-1**, impacts associated with geology and soils during construction would be less than significant. **Less than significant with mitigation.**

### Question C

The project is not located on an unstable geologic or soil unit (NRCS, 2014). **Less than significant impact.**

### Question D

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures that may require special design considerations. The soils on the project site have a moderate to high shrink-swell potential (NRCS, 2014). Compliance with existing code requirements would ensure that impacts to proposed structures due to high shrink-swell potential would be less than significant. **Less than significant impact.**

### Question E

No septic tanks or wastewater disposal systems are proposed as part of the project. No impacts would occur. **No impact.**

### Mitigation Measures

**GS-1** Erosion control measures shall be required during construction and the conditions of the SAA, 404, and 401 permits shall be followed. Erosion and water quality control measures could include but not be limited to the following:

- Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas.
- Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction. Soil conservation practices shall be completed during the fall or late winter to reduce erosion during spring runoff. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.
- Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures such as terraces, dikes, and ditches shall collect and direct runoff water around vulnerable areas to prepared drainage outlets. Surface roughening, berms, check dams, hay bales, or similar devices shall be used to reduce runoff velocity and erosion.
- Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water

long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.

- Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events.
- Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.
- Disturbed areas will be re-vegetated after completion of construction activities.
- All necessary permits and approvals shall be obtained.
- Provide sanitary facilities for construction workers.

|   | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                |
|---|--------------------------------|---|-------------------------------------|--------------------------|
| <b>7. GREENHOUSE GAS EMISSIONS</b>  |                                |   |                                     |                          |
| Would the project:  |                                |   |                                     |                          |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?       | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Environmental Setting**

The PCAPCD provides tools for evaluating and addressing climate change in CEQA documents; however, the PCAPCD does not provide a quantitative significance threshold for project-related greenhouse gas (GHG) emissions. Although the PCAPCD does not provide significance criteria for project-related GHG emissions, it recommends using the California Air Pollution Control Officers Association’s (CAPCOA) 2008 *CEQA and Climate Change* document. This document provides a methodology for quantifying GHG emissions and a potential quantitative significance threshold for GHG emission of 900 tons per year; therefore, GHG emissions will be quantified using the CAPCOA methodology and for this project the significance threshold for project-related GHG emissions will be 900 tons per year.

## **Impact Discussion**

### **Questions A and B**

The Proposed Project would directly generate GHGs during construction of the barrier and installation of the fish screen. GHG emissions are estimated to be 549 metric tons of carbon dioxide (CO<sub>2</sub>) equivalent. The same assumption used to determine NOx and ROG emissions were used to estimate project related GHG emissions (refer to the **Air Quality** section). These assumptions include:

- Construction of the barriers and fish screens would occur over a 60 day period;
- OFFROAD2007 emission factors were used to estimate construction emissions;
- Construction equipment included one crane and one excavator, four (4) haul or construction trucks (flat-bed delivery, welding, dump, etc.) and 10 worker vehicles;
- Workers would travel 25 miles one-way per day;
- Haul and construction trucks would travel 400 miles per day;
- Emission factors were based on construction year 2014.

Operation of the Proposed Project would include periodic vehicle trips by the maintenance staff and maintenance equipment that would emit far less GHG emissions than the 549 metric tons of CO<sub>2</sub> equivalent emitted during construction given the scale of the project. Construction and operational project-related GHG emissions are less than the CAPCOA's threshold of 900 metric tons per year; therefore, the project would not significantly impact the environment through GHG emissions. The Proposed Project also would not conflict with any applicable policy or regulation adopted for the purpose of reducing the emissions of GHG. **Less than significant impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|--|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>8. HAZARDS AND HAZARDOUS MATERIALS</b>  |                                |   |                                     |                                     |
| Would the project:   |                                |   |                                     |                                     |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |

### **Environmental Setting**

The project site is located in an undeveloped region of Placer County. Database searches were conducted for records of known sites of hazardous materials generation, storage, or

contamination, as well as known storage tank sites on or near the project site. Databases were searched for sites and listings up to a one-mile radius from a point roughly equivalent to the center of the project site. The database search resulted in zero sites within a one-mile radius of the project site. The project site was not listed on any database as having previous and/or current generation, storage, and/or use of hazardous materials. Additionally, within the one-mile search radius no sites were identified that had current and/or historic hazardous materials (SWRCB, 2012). The project site is not listed pursuant to Government Code §65962.5.

## **Impact Discussion**

### **Question A**

During grading and construction, it is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, and hydraulic fluid, would be brought on-site. As with any liquid and solid, during handling and transfer from one container to another, the potential for an accidental release exists. The accidental release could pose both a hazard to construction employees as well as the environment. Because the Proposed Project will impact 1.1 acres of soil, it is required to file a SWPPP for coverage under the NPDES General Construction Permit. No hazardous materials are associated with operation of the Proposed Project. With the implementation of **Mitigation Measures HM-1 through HM-6**, impacts associated with hazardous materials handling during construction would be less than significant. **Less than significant with mitigation.**

### **Question B**

Construction and operation of the Proposed Project would not involve significant risk to construction workers or the public. **Less than significant impact.**

### **Question C**

The closest school to the project site is Creekside Oaks Elementary School located approximately 4.4 miles to the northeast. There would be no impact due to hazardous emissions, materials, or waste. **No impact.**

### **Question D**

The project site is not listed pursuant to Government Code §65962.5. **No impact.**

### **Questions E and F**

The closest airport is the Lincoln Regional Airport, located approximately four miles northeast of the project site. The closest private airstrip is located approximately 5.25 miles west of the project site. The project is not located within an airport land use plan. The project would not result in a safety hazard for people residing or working in the project area. **No impact.**

## Question G

Construction activity and operation are not expected to cause delays in traffic, nor would the fish screen or sheet-pile physically interfere with any adopted emergency response or evacuation plans. As such, no impacts would occur. Potential traffic impacts are discussed further in the Traffic and Transportation section. **No impact.**

## Question H

The California Department of Forestry and Fire Protection has mapped the project site as falling outside of an area of very high fire hazard severity zone (VHFHSZ) (CDF, 2007). However, there is still some risk of wildfire when doing construction work in remote areas, such as the project site. Therefore, **Mitigation Measures HM-4 through HM-5** are recommended to ensure the impacts are less than significant. **Less than Significant with Mitigation.**

### Mitigation Measures

- HM-1** To reduce the potential for accidental releases, fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment tanks and shall not otherwise be stored on site.
- HM-2** Personnel shall follow written Standard Operating Procedures (SOPs) for filling and servicing construction equipment and vehicles, and any additional requirements of the SWPPP prepared for the site. The SOPs, which are designed to reduce the potential for incidents involving hazardous materials, shall include the following:
- Refueling shall be conducted only with approved pumps, hoses, and nozzles;
  - Catch pans shall be placed under equipment to catch potential spills during servicing;
  - All disconnected hoses shall be placed in containers to collect residual fuel from the hose;
  - Vehicle engines shall be shut down during refueling;
  - No smoking, open flames, or welding shall be allowed in refueling or service areas;
  - Refueling shall be performed away from bodies of water to prevent contamination of water in the event of a leak or spill;
  - Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents;
  - Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with local, State, and federal regulations;
  - All containers used to store hazardous materials shall be inspected at least once per week for signs of leaking or failure. All maintenance and refueling areas shall be

inspected monthly. Results of inspections shall be recorded in a logbook that would be maintained on site; and

- The amount of hazardous materials used in project construction and operation shall be consistently kept at the lowest volumes needed.

**HM-3** If suspected soil contamination is encountered during excavation and grading activities, all work shall be halted and a qualified individual, in consultation with the Central Valley RWQCB, shall determine the appropriate course of action.

**HM-4** During construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak.

**HM-5** Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles and heavy equipment.

**HM-6** A construction staging area will be secured with appropriate BMPs prior to commencement of construction activities to ensure containment of any oil, gas, or other hazardous materials. Storage of construction equipment and construction material shall occur within the staging area only. If warranted, vehicle maintenance shall only occur within the staging area.

|   | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|---|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>9. HYDROLOGY AND WATER QUALITY</b>   |                                |   |                                     |                                     |
| Would the project:  |                                |   |                                     |                                     |
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d) Substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                 | <input type="checkbox"/>            | <input type="checkbox"/>            |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## **Environmental Setting**

The fish screens will be installed in Auburn Ravine; construction staging areas will be located south of the ravine, placed to avoid existing wetland and vernal pool habitat. Auburn Ravine has its headwaters in the Sierra Nevada foothills; it discharges in the East Side Canal thence the Cross Canal thence the Sacramento River.

The Federal Emergency Management Agency (FEMA) oversees the delineation of flood zones and the provision of federal disaster assistance. FEMA manages the National Flood Insurance Program and publishes the Flood Insurance Rate Maps (FIRMs), which show the expected frequency and severity of flooding by area, typically for the existing land use and type of drainage/flood control facilities present. The project site is located on FIRM 06061C0400F. The entirety of the project site is located within FEMA 100-year flood zone (Zone A) because it occurs within and adjacent to the Auburn Ravine (FEMA, 2003).

The project site lies over the north central portion of Sacramento Valley Groundwater Basin, a complex system of groundwater aquifers generally composed of marine sediments and stratified sand, silt, and clay layers many thousands of feet thick; only the upper layers contain usable water (DWR, 2012). The portion of the Sacramento Valley basin that lies beneath Placer County, called the North American subbasin, contains a fresh water storage volume estimated at more than 4,900,000 acre-feet (DWR, 2012).

## **Current Water Rights and Diversions**

SSWD operates the Pleasant Grove Canal under two existing water rights (License 4653 and License 11121). License 4653 (Application 14430), issued on June 10, 1957, authorizes the diversion of 2.0 cubic feet per second (cfs) between April 1 and November 1 each year. The diversion under License 4653 does not exceed 852.9 acre-feet (af) per year from Coon Creek. License 11121 (Application 22102) was issued on May 26, 1981, and authorizes the diversion of 40.3 cfs from April 1 to June 15 and from September 1 to October 31. The total diversion under License 11121 does not exceed 4,769 af per year from Coon Creek, Markham Ravine, East Side Canal, and Auburn Ravine.

The Proposed Project would ensure the continued diversion and beneficial use of SSWD's licensed water rights, but would not change the amount of water diverted by SSWD.

## **Impacts and Mitigation Measures**

### **Question A**

Construction equipment and materials have the potential to leak, thereby discharging pollutants into stormwater. Construction site pollutants include particulate matter, sediment, oils and greases, concrete, and adhesives. Discharge of these pollutants could result in contamination of area drainages and Auburn Ravine, causing an exceedance of water quality objectives. Because grading and earth moving activities associated with the components of the Proposed

Project have the potential to result in soil erosion, siltation, and contamination of stormwater, this is considered a potentially significant impact.

As required by **Mitigation Measure GS-1** in the **Geology and Soils** section and **Mitigation Measures HM-1 through HM-6** in the **Hazardous Materials** section, BMPs will be used to reduce the potential for surface water contamination from construction activities to a less-than-significant level. **Less than significant with mitigation.**

### **Question B**

The Proposed Project does not involve the use of groundwater resources. No significant impacts to groundwater resources would occur. **No impact.**

### **Question C**

Construction of the Proposed Project would involve some ground disturbing and earthmoving activities. Operation of the Proposed Project, which would entail minor, periodic maintenance of the fish screens, would not cause erosion. **Mitigation Measure GS-1** outlined in the **Geology and Soils** section would prevent substantial erosion from construction activities, and potential impacts are considered less than significant. The project design will ensure no additional impact to jurisdictional waters. **Less than significant with mitigation.**

### **Question D**

As noted in Question C above, the Proposed Project would include ground disturbing and earthmoving activities. However, construction of the Proposed Project would result in only slight changes to the volume and rate of runoff. No structures or grades would be introduced that could result in flood flows. The project design will ensure no impact to jurisdictional waters. **Less than significant impact.**

### **Question E**

The Proposed Project would not contribute to excess runoff water that would exceed the capacity of existing or planned stormwater drainage systems or would provide substantial additional sources of polluted runoff. **No impact.**

### **Question F**

Implementation of **Mitigation Measure GS-1** outlined in the **Geology and Soils** section would prevent substantial erosion from construction activities and project operation. **Less than significant with mitigation.**

### **Questions G and H**

The installation of the fish screen and sheet-pile will be conducted within an area deemed as Zone A (100- year flood zone). However, project components do not include habitable

structures. Although the installation of the fish screen and sheet-pile will be conducted within an area deemed as Zone A (100- year flood zone), the Proposed Project would not impede or redirect flood flows in a significant way. **Less than significant impact.**

**Question I**

The Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding. The project site would not cause the failure of a dam or levee. **No impact.**

**Question J**

The project site is not located within a potentially affected coastal area, or located near a large body of water that may be affected by a tsunami or a seiche. The Proposed Project would not cause a mudflow. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact |
|--|--------------------------------|---|------------------------------|-----------|
|--|--------------------------------|---|------------------------------|-----------|

**10. LAND USE AND PLANNING**

Would the project:

|  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Physically divide an established community?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Environmental Setting**

The project area is within the Placer County’s jurisdiction and is located in an area designated as agriculture/timberland (Placer County, 1994). The “Agriculture/Timberland” land use designation identifies lands that are most suitable for agriculture, timber production, or open space. The project area is zoned Farm, 80-acre minimum. This zoning designation identifies lands which are suitable for agriculture, grazing, forestry, and mining. The Placer County General Plan also identifies the goal of protecting and enhancing the natural qualities of Placer County’s streams, creeks, and groundwater by requiring the provision of sensitive habitat buffers around streams and riparian zones.

**Impact Discussion**

**Question A**

The Proposed Project would not create barriers that would physically divide an established community. **No impact.**

**Questions B and C**

The Proposed Project is not expected to significantly alter existing land uses or create a use that is incompatible with current designations. The Proposed Project is consistent with environmental policies of the Placer County General Plan. Environmental impacts related to land use would have no impact. The project site is located within the proposed Placer County Conservation Plan Area, but it is consistent with the goals and policies of the habitat conservation plan and no conflicts would occur. **Less than significant impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                |
|--|--------------------------------|---|-------------------------------------|--------------------------|
| <b>11. MINERAL RESOURCES</b>   |                                |   |                                     |                          |
| Would the project:   |                                |   |                                     |                          |
| a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?                          | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Environmental Setting**

The project area is located within the Great Valley geomorphic province of California. The Great Valley is surrounded by the Coast Ranges to the west, the Klamath and Cascade mountain ranges to the north, and the Sierra Nevada Mountains to the east. The Great Valley Geomorphic province is generally characterized by a relatively flat alluvial plain composed of deep sediment deposits. Mineral resources in Placer County include sand, gravel, clay, gold, silver, natural gas and petroleum. The closest active mining operations to the project site are extracting clay, gravel, and aggregate (USGS, 2014).

## **Regulatory Setting**

The California Surface Mining and Reclamation Act (SMARA) is part of the California PRC, Division 2, Chapter 9, Sections 2710, et seq. SMARA requires classification and designation of land into Mineral Resource Zones (MRZs) according to the mineral potential of that area. Sections 2761 (a) and (b) and 2790 of SMARA provides a framework for classification designations that are administered by the California Division of Mines and Geology (CDMG), and the State Mining and Geology Board.

Natural resources can include geologic deposits of valuable minerals used in various manufacturing processes and the production of construction materials. SMARA was enacted to limit new development in areas with significant mineral deposits and requires the state geologist to classify lands within California based on mineral resource availability. The classifications are categorized by MRZs, according to the presence or absence of significant mineral resources. The classification process disregards the existing land use or land ownership and is based solely on subsurface geology. The primary goal of classifying MRZs is to ensure local governments recognize the mineral potential of the land before making land use decisions that preclude mining of the geological resource.

## **Impact Discussion**

### **Questions A and B**

There are no important mineral resources known to be located on the project site. The Proposed Project would not result in the loss of a locally-important mineral resource. **Less than significant impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|--|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>12. NOISE</b>   |                                |   |                                     |                                     |
| Would the project:   |                                |   |                                     |                                     |
| a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing in or working in the project area to excessive noise levels? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### **Environmental Setting**

The dominant sources of noise in the vicinity of the Proposed Project consist of traffic noise from Moore, Catlett, and Dowd Roads and agricultural noise from general machinery use, pest control devices that use noise to drive away birds from agricultural areas, and irrigation system pumps. Placer County General Plan Noise Element, Table 9-1 provides an exterior noise standard of 50 dbA, Ldn at the property line of the receiving land use or outdoor activity. The Placer County Ordinance, Article 9.36.030 provides an exemption for construction noise if conducted between the hours of 6 a.m. and 8 p.m. Monday through Friday, and between the hours of 8 a.m. and 8 p. m. Saturday and Sunday provided, however, all construction equipment shall be fitted with factory installed muffling devices and that all construction equipment shall be maintained in good working order.

The nearest sensitive noise receptor in the vicinity of the Proposed Project is a residence located approximately 2,600 feet northeast of the project site.

**Impact Discussion**

**Questions A through D**

The Proposed Project would result in temporary noise generation related to short-term construction activities to install the fish screens and sheet-pile. At the project site, construction activities would require the use of heavy equipment, which can emit noise levels of up to 89 dBA, Ldn at 50 feet. Construction activities have the potential to exceed the Placer County General Plan noise standard of 50 dBA, Ldn at 50 feet from the noise source. However, given the distance to the nearest sensitive noise receptor (2,600 feet northeast of the project site), noise levels from construction activates at the property line of the noise sensitive receptor would be considerably less than the Placer County General Plan noise standard of 50 dBA, Ldn.

Operation of the Proposed Project would consist of periodic maintenance of the barrier and fish screen; these activities would not cause a substantial permanent increase in the ambient noise level. The Proposed Project would not expose persons to noise levels above the County noise standard, generate groundborne vibration at the nearest sensitive receptor, or expose sensitive noise receptors to substantial noise or groundborne vibration. Impacts are less than significant. **Less than significant impact.**

**Questions E and F**

The project site is not in the vicinity of a private or public airstrip. No impacts would occur. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact |
|--|--------------------------------|---|------------------------------|-----------|
|--|--------------------------------|---|------------------------------|-----------|

**13. POPULATION AND HOUSING**

Would the project:

|  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Environmental Setting**

The Proposed Project is located in rural Placer County. The closest residential area is the City of Lincoln, located approximately 5.5 miles east of the project site.

**Impact Discussion**

**Questions A, B, and C**

The Proposed Project does not involve the development of any homes or businesses and would not generate commercial activities substantial enough to induce growth in the project area. Impacts are less than significant. It would not displace existing housing or people and would not necessitate the construction of replacement housing elsewhere. **No impact.**

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|  | Potentially<br>Significant<br>Impact | Less-Than-<br>Significant<br>with<br>Mitigation<br>Incorporation | Less-Than-<br>Significant<br>Impact | No<br>Impact |
|--|--------------------------------------|--|-------------------------------------|--------------|
|--|--------------------------------------|--|-------------------------------------|--------------|

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**14. PUBLIC SERVICES**

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

|                             |                          |                          |                          |                                     |
|-----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection?         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks?                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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**Environmental Setting**

Public services include fire and police protection, schools, parks, and other public facilities. The project area is located within unincorporated Placer County. Police protection services and law enforcement services in unincorporated areas of Placer County are provided by the Placer County Sheriff’s Department. Fire protection services in the project area are provided by the Western Placer Fire Protection District. The Western Placer Unified School District serves the project area.

**Impact Discussion**

**Questions A through E**

The Proposed Project involves the enhancement of existing water diversion infrastructure and is not anticipated to result in significant impacts to public services. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact                           |
|--|--------------------------------|---|------------------------------|-------------------------------------|
| <b>15. RECREATION</b>  |                                |   |                              |                                     |
| Would the project:   |                                |   |                              |                                     |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?                        | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

**Environmental Setting**

Recreational areas in Placer County primarily include regional parks, wildlife preserves, wild land areas, lakes, and rivers which offer such recreational opportunities as hiking, picnicking, hunting, boating, fishing, and swimming.

**Impact Discussion**

**Question A**

The Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **No impact.**

**Question B**

The Proposed Project does not include recreation facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. **No impact.**

|   | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|---|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>16. TRANSPORTATION AND CIRCULATION</b>   |                                |   |                                     |                                     |
| Would the project:  |                                |   |                                     |                                     |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with an applicable congestion management program, including, but not limited to level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Result in inadequate emergency access?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Conflict with adopted policies regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of such facilities?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### **Environmental Setting**

Access to the Proposed Project site is from a private access road that comes off East Catlett Road on the south side of Auburn Ravine. The access road intersects with Dowd Road southeast of the project site. Dowd Road intersects with Moore Road to the north and Catlett Road to the South. Moore and Catlett roads are east west two lane rural roadways and Dowd Road is a north south two lane rural roadway. The surrounding public roadways carry a variety of vehicles whose destinations include the City of Lincoln, the City of Roseville, numerous scattered rural residences, and agricultural lands.

## **Regulatory Setting**

### **County General Plan**

The Placer County General Plan, adopted August 1994, is the guiding document for development in the County, which includes the project site. Relevant goals and policies contained within the County's General Plan related to transportation are provided below.

#### **Policy**

Policy 3.A.12: The County shall require an analysis of the effects of traffic from all land development projects. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. Such improvements may include a fair share of improvements that provide benefits to others.

Policy 3.A.14: The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system. Exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues.

## **Impact Discussion**

### **Questions A, D, and E**

A negligible increase in traffic would occur from the construction and implementation of the Proposed Project. A temporary increase in traffic would occur due to the construction crews and transportation of materials to and from the proposed construction area. Operation and maintenance of the Proposed Project would generate periodic vehicle trips by maintenance staff. Construction traffic would generally take place during off-peak traffic hours and any increase in traffic that is generated would not represent a significant impact to transportation or circulation in the vicinity of the project site. No substantial new impediments to emergency access or incompatible uses would occur. The Proposed Project is not result in inadequate parking capacity, or conflict with adopted alternative transportation policies, plans, or programs. Potential impacts are considered less than significant. **Less than significant impact.**

### **Questions B, C, and F**

The Proposed Project would not alter existing roadways or conflict with adopted policies supporting alternative transportation. The project site is not in the vicinity of a private or public airstrip and therefore, would not cause a change to air traffic patterns. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact        | No Impact                           |
|--|--------------------------------|---|-------------------------------------|-------------------------------------|
| <b>17. UTILITIES AND SERVICE SYSTEMS</b>   |                                |   |                                     |                                     |
| Would the project:   |                                |   |                                     |                                     |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?                           | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?                                    | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### **Environmental Setting**

The project would not be served by public water or wastewater systems. The closest solid waste facility is the Western Regional Landfill approximately 2.5 miles southeast of the project site.

## **Impact Discussion**

### **Question A**

No new wastewater generation would result as part of the Proposed Project. The project site is not connected to wastewater or storm water facilities. **No impact.**

### **Question B**

The project would not require nor result in the construction of new water or wastewater treatment facilities, or the expansion of existing facilities. **No impact.**

### **Question C**

Construction of the Proposed Project would not result in the construction of new drainage facilities nor the expansion of existing drainage facilities. **No impact.**

### **Question D**

Additional water supplies, such as connection to public water supply, would not be required for the Proposed Project. **No impact.**

### **Question E**

The Proposed Project does not require wastewater services. **No impact.**

### **Question F**

Western Placer Waste Management Authority, based in the City of Roseville, provides solid waste services to western Placer County. Solid waste goes to the Western Regional Sanitary Landfill, located on SR-65 between Lincoln and Roseville. Although the project could potentially generate waste during the construction phase, it would not be substantial. Any solid waste generated during construction could be accommodated by the existing solid waste facilities. Once in operation, the Proposed Project would not generate any solid waste. **Less than significant impact.**

### **Question G**

The Proposed Project would not conflict with government regulations concerning the generation, handling or disposal of solid waste. **No impact.**

|  | Potentially Significant Impact | Less-Than-Significant with Mitigation Incorporation | Less-Than-Significant Impact | No Impact |
|--|--------------------------------|---|------------------------------|-----------|
|--|--------------------------------|---|------------------------------|-----------|

**18. MANDATORY FINDINGS OF SIGNIFICANCE**

Would the project:

|  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)  | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Impact Discussion**

**Question A**

As discussed in the preceding sections, the Proposed Project has a potential to create short term impacts which could degrade the quality of the environment by adversely impacting biological resources, cultural resources, geology and soils, hazardous materials, and hydrology and water quality. However, with implementation of the identified mitigation measures, potential impacts would be reduced to a less than significant level. The long term effect of the Proposed Project is the improvement of habitat for listed species and the avoidance of take of listed fish species. **Less than significant with mitigation.**

**Question B**

Potential adverse environmental impacts of the Proposed Project, in combination with the impacts of other past, present, and future projects, would not contribute to cumulatively significant effects on the environment. **Less than significant impact.**

### **Question C**

No potentially significant adverse effects to humans have been identified. **Less than significant impact.**

## 4.0 SIGNIFICANCE DETERMINATION

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On the basis of the environmental evaluation presented in **Section 3.0**:

- I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
  
- I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project design and project-specific mitigation measures described in **Section 3.0** have been agreed to by the project proponent. A NEGATIVE DECLARATION is recommended to be adopted.
  
- I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
South Sutter Water District  
Lead Agency

## 5.0 LIST OF PREPARERS

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### 5.1 SOUTH SUTTER WATER DISTRICT – LEAD AGENCY

### 5.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE – RESPONSIBLE AGENCY

### 5.3 ENVIRONMENTAL CONSULTANTS

#### ANALYTICAL ENVIRONMENTAL SERVICES

|                         |  |
|-------------------------|--|
| <b>Principal:</b>       | David Zweig                                  |
| <b>Project Manager:</b> | Pete Bontadelli                              |
| <b>Technical Staff:</b> | Annalee Sanborn<br>Kelly Bayne<br>Erin Quinn |
| <b>Graphics:</b>        | Dana Hirschberg<br>Glenn Mayfield            |

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# ***Appendix A***

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## **VASCULAR PLANT CHECKLIST**

# APPENDIX A

## VASCULAR PLANT CHECKLIST Family Water Alliance – South Sutter Water District

\* denotes a non-native plant species.

### FLOWERING PLANTS – DICOTS

#### ACERACEAE

*Acer negundo* (box elder)

#### ANACARDEACEAE

*Toxicodendron diversilobum* (Poison oak)

#### ASTERACEAE

*Baccharis pilularis* (coyote brush)

*Hypochaeris glabra* (smooth cat's ear)

*Matricaria discoides*\* (pineapple weed)

*Senecio vulgare*\* (common groundsel)

*Sonchus oleraceus*\* (prickly sow thistle)

#### BRASSICACEAE

*Brassica nigra*\* (black mustard)

*Brassica rapa*\* (field mustard)

*Capsella bursa-pastoris* (shepherd's purse)

*Raphanus raphanistrum*\* (wild radish)

*Raphanus sativus*\* (radish)

#### CARYOPHYLLACEAE

*Cerastium arvenses*\* (common chickweed)

*Spergularia rubra*\* (red sandspurry)

#### CONVOLVULACEAE

*Convolvulus arvensis*\* (common bindweed)

#### FABACEAE

*Lotus corniculatus* (bird's-foot trefoil)

*Medicago polymorpha*\* (burclover)

#### FAGACEAE

*Quercus lobata* (valley oak)

#### GERANIACEAE

*Erodium botrys*\* (long-beaked storksbill)

*Erodium cicutarium*\* (fillaree)

*Geranium dissecta* (cutleaf geranium)

#### LAMEACEAE

*Lamium amplexicaule*\* (purple henbit)

*Mentha pulegium*\* (pennyroyal)

#### OLEACEAE

*Fraxinus latifolia* (Oregon ash)

#### ONAGRACEAE

*Epilobium ciliatum*\* (fringed willow-herb)

#### PLATAGINACEAE

*Plantago lanceolata* (plantain)

#### POLYGONACEAE

*Rumex acetocella* (sheep sorrel)

*Rumex crispus*\* (curly dock)

#### PRIMULACEAE

*Anagallis arvensis*\* (Scarlet pimpernel)

#### ROSACEAE

*Rosa californica* (wild rose)

*Rubus armeniacus*\* (Hymalayan blackberry)

*Rubus ursinus* (California blackberry)

#### RUBIACEAE

*Galium aparine* (bedstraw)

#### SALICACEAE

*Populus fremontii* (Fremont cottonwood)

*Salix gooddingii* (black willow)

#### VISCACEAE

*Phoradendron* sp. (mistletoe)

### FLOWERING PLANTS – MONOCOTS

#### CYPERACEAE

*Carex* sp.

*Cyperus eragrostis* (nutsedge)

#### JUNCACEAE

*Juncus effusus* (rush)

*Juncus effusus* var. *occidentalis* (field rush)

#### POACEAE

*Aira caryophylla* (silver hair grass)

*Bromus diandrus*\* (ripgut brome)

*Bromus hordeaceus*\* (soft chess)

*Dactylon*

*Hordeum marinum*\* (barley)

*Vulpia myuros*\* (rattail fescue)

# ***Appendix B***

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## **REGIONALLY OCCURRING SPECIAL-STATUS SPECIES**

**APPENDIX B**  
**REGIONALLY OCCURRING SPECIAL-STATUS SPECIES**

| SCIENTIFIC NAME<br>COMMON NAME  | FEDERAL /<br>STATE /<br>CNPS-OTHER<br>STATUS | DISTRIBUTION  | HABITAT REQUIREMENTS   | PERIOD OF<br>IDENTIFICATION | POTENTIAL TO OCCUR<br>ON-SITE  |
|---|--|---|--|-----------------------------|--|
| <b>Plants</b>   |  |   |  |                             |  |
| <i>Balsamorhiza macrolepis</i><br>Big-scale balsamroot                    | --/--/1B.2                                   | Known to occur in Alameda, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Solano, Sonoma, Tehama, and Tuolumne counties ( CNPS 2012).   | Chaparral, cismontane woodland, valley and foothill grassland (sometimes serpentinite). Elevations; 90-1,550 meters (CNPS 2012).                                   | March-June                  | <b>No.</b> The project site occurs outside of the known elevation range of this species.   |
| <i>Chloropyron molle</i> ssp. <i>hispidum</i><br>Hispid bird's-beak       | --/--/1B.1                                   | Known to occur in Alameda, Fresno, Kern, Merced, Placer, and Solano counties (CNPS 2012).   | Alkaline, meadows and seeps, playas, and valley and foothill grassland. Elevations; 1-555 meters (CNPS 2012).  | June-September              | <b>No.</b> The project site does not contain suitable habitat for this species.  |
| <i>Downingia pusilla</i><br>Dwarf downingia                               | --/--/2.2                                    | Known to occur in Amador, Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties (CNPS 2012).   | Valley and foothill grasslands (mesic), and vernal pools. Elevations; 1-455 meters (CNPS 2012).  | March-May                   | <b>No.</b> The project site does not contain suitable habitat for this species. The soils are not mesic and there are no vernal pools. |
| <i>Fritillaria agrestis</i><br>Stinkbells                                 | --/--/4.2                                    | Known to occur in Alameda, Contra Costa, Fresno, Kern, Mendocino, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Stanislaus, Tuolumne, Ventura, and Yuba counties (CNPS 2012). | Clay, sometimes serpentinite. Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Elevations; 10-1,555 meters (CNPS 2012). | March-June                  | <b>No.</b> The project site does not contain suitable habitat for this species.  |
| <i>Gratiola heterosepala</i><br>Boggs Lake hedge-hyssop                   | --/CE/1B.2                                   | Known to occur in Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, and Tehama counties (CNPS 2012).  | Marshes and swamps (lake margins), vernal pools/clay. Elevations; 10-2,375 meters (CNPS 2012).   | April-August                | <b>No.</b> The project site does not contain suitable habitat for this species.  |
| <i>Juncus leiospermus</i> var. <i>ahartii</i><br>Ahart's dwarf rush       | --/--/1B.2                                   | Known to occur in Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba counties (CNPS 2012).  | Valley and foothill grasslands (mesic). Elevations; 30-229 meters (CNPS 2012).   | March-May                   | <b>No.</b> The project site occurs outside of the known elevation range of this species.   |
| <i>Juncus leiospermus</i> var. <i>leiospermus</i><br>Red Bluff dwarf rush | --/--/1B.1                                   | Known to occur in Butte, Placer, Shasta, and Tehama counties (CNPS 2012).   | Vernally mesic/chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Elevations; 35-1,020 meters (CNPS 2012).        | March-May                   | <b>No.</b> The project site occurs outside of the known elevation range of this species.   |

| SCIENTIFIC NAME<br>COMMON NAME   | FEDERAL /<br>STATE /<br>CNPS-OTHER<br>STATUS | DISTRIBUTION  | HABITAT REQUIREMENTS   | PERIOD OF<br>IDENTIFICATION | POTENTIAL TO OCCUR<br>ON-SITE  |
|--|--|---|--|-----------------------------|--|
| <i>Legenere limosa</i><br>Legenere   | --/--/1B.1                                   | Known to occur in Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, Shasta, San Joaquin, San Mateo, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties (CNPS 2012).  | Vernal pools. Elevations; 1-880 meters (CNPS 2012).  | April-June                  | <b>No.</b> The project site does not contain suitable habitat for this species. There are no vernal pools on the site. |
| <i>Navarretia myersii</i> ssp.<br><i>myersii</i><br>Pincushion navarretia        | --/--/1B.1                                   | Known to occur in Amador, Calaveras, Merced, Placer, and Sacramento counties (CNPS 2012).   | Vernal pools, often acidic. Elevations; 20-330 meters (CNPS 2012).   | April-May                   | <b>No.</b> The project site does not contain suitable habitat for this species.  |
| <i>Navarretia nigelliformis</i> ssp.<br><i>nigelliformis</i><br>Adobe navarretia | --/--/4.2                                    | Known to occur in Amador, Butte, Contra Costa, Colusa, Fresno, Kern, Merced, Monterey, Placer, Sutter, and Tulare counties (CNPS 2012).   | Valley and foothill grassland/vernally mesic, vernal pools, clay/sometimes serpentinite. Elevations; 100-1,000 meters (CNPS 2012).   | April-June                  | <b>No.</b> The project site occurs outside of the known elevation range of this species.                               |
| <i>Sagittaria sanfordii</i><br>Sanford's arrowhead                               | --/--/1B.2                                   | Known to occur in Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, and Ventura counties (CNPS 2012).   | Marshes and swamps (assorted shallow freshwater). Elevations; 0-650 meters (CNPS 2012).  | May-October                 | <b>No.</b> The project site does not contain suitable habitat for this species.  |
| <b>Animals</b>   |  |   |  |                             |  |
| <b>Invertebrates</b>   |  |   |  |                             |  |
| <i>Branchinecta conservatio</i><br>Conservancy fairy shrimp                      | FE/--/--                                     | Populations are found at six disjunctive locations: the Vina Plains north of Chico in Tehama County; south of Chico in Butte County; Sacramento National Wildlife Refuge in Glenn County; the Jepson Prairie in Solano County; the Haystack Mountain area northeast of Merced in Merced County (Eng et al. 1990), and the Lockwood Valley in Ventura County (Michael Fugate, University of California at Riverside, pers. comm., 1991). | Conservancy fairy shrimp populations live in ephemeral freshwater habitats, such as vernal pools and swales. None are known to occur in running or marine waters or other permanent bodies of water. | November to early April     | <b>No.</b> The project site does not contain suitable habitat for this species.  |

| SCIENTIFIC NAME<br>COMMON NAME  | FEDERAL /<br>STATE /<br>CNPS-OTHER<br>STATUS | DISTRIBUTION   | HABITAT REQUIREMENTS   | PERIOD OF<br>IDENTIFICATION   | POTENTIAL TO OCCUR<br>ON-SITE  |
|---|--|--|--|---|--|
| <i>Branchinecta lynchi</i><br>vernal pool fairy shrimp                        | FT/--/--                                     | Known across the Central Valley and Coast Ranges of California. Counties include Alameda, Butte, Contra Costa, Colusa, El Dorado, Fresno, Glenn, Kings, Lake, Los Angeles, Madera, Merced, Monterey, Napa, Placer, Sacramento, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Shasta, Solano, Stanislaus, Tehama, Tulare, Riverside, and Yuba. Also occurs in southern Oregon. | Ephemeral wetland habitats and vernal pools within sandstone, alkaline soils, and alluvial fan terraces, within annual grassland and pine forests. Elevations; 10-1700 meters.               | Wet season:<br>typically December<br>– May (adults)<br>Dry season: typically<br>June- November<br>(cysts) | <b>No.</b> There is no suitable habitat for this species on the project site. There are no ephemeral wetlands or vernal pools present. |
| <i>Desmocerus californicus dimorphus</i><br>valley elderberry longhorn beetle | FT/--/--                                     | Known throughout the riparian forests of the Central Valley from Redding to Bakersfield. Counties include Amador, Butte, Calaveras, Colusa, El Dorado, Fresno, Glenn, Kern, Madera, Mariposa, Merced, Napa, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba.   | Riparian forest communities. Exclusive host plant is elderberry ( <i>Sambucus</i> species), which must have stems $\geq$ 1-inch diameter for the beetle. Elevations range from 0-762 meters. | Year round  | <b>No.</b> There is no suitable habitat for this species on the project site. No elderberry plants are present.                        |
| <i>Lepidurus packardii</i><br>vernal pool tadpole shrimp                      | FE/--/--                                     | Known across the Central Valley and in the San Francisco Bay area. Counties include Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kings, Merced, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba.   | Wide variety of ephemeral wetland habitats. Typically vernal pools on High Terrace landforms within annual grassland.  | Wet season:<br>typically November-<br>April (adults)<br>Dry season: typically<br>May-October (cysts)      | <b>No.</b> The project site does not contain suitable habitat for this species.  |

| <b>Fishes</b>   |           |  |   |                |  |
|---|-----------|--|---|----------------|--|
| <i>Acipenser medirostris</i><br>green sturgeon                                    | FT/--/--  | Adults occur in coastal waters from Mexico to Alaska and have been observed along the west coast of North America. Spawning occurs within the Rogue and Illinois Rivers in Oregon, the Klamath River Basin, the Sacramento River, the Feather River, the Pit River, and the McCloud River. Spawning is suspected within the Trinity River, South Fork Trinity, and the Eel River. Counties include Butte, Colusa, Glenn, Humboldt, Mendocino, Nevada, Placer, Sacramento, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehama, Trinity, Yolo, and Yuba. | Utilizes both freshwater and saltwater habitats. Spawning occurs in deep pools or holes in large, turbulent, freshwater river mainstems. Eggs are cast over large cobble, clean sand, or bedrock substrates. Cold, clean water is required for development. Adults live in oceanic waters, bays, and estuaries. | Consult Agency | <b>No.</b> The project site has no suitable habitat and occurs outside of the known range of this species. |
| <i>Hypomesus transpacificus</i><br>Delta smelt                                    | FT/CT/--  | Occurs almost exclusively in the Sacramento-San Joaquin estuary, from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. May also occur in the San Francisco Bay.  | Estuarine waters. Majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta.  | Consult Agency | <b>No.</b> The project site has no suitable habitat and occurs outside of the known range of this species. |
| <i>Oncorhynchus mykiss</i><br>steelhead<br>Central Valley steelhead               | FT/--/--  | Spawn in the Sacramento and San Joaquin rivers and tributaries before migrating to the Delta and Bay Area.   | In the Bay, requires shelter in dense marine vegetation (i.e., eelgrass) as juveniles, and a constant supply of larger fish such as herring as adults.  | Consult Agency | <b>Yes.</b> The Auburn Ravine is considered suitable habitat for this species.                             |
| <i>Oncorhynchus tshawytscha</i><br>Chinook salmon<br>Central Valley spring-run    | FT/CT/--  | Spawn in the Sacramento river and some of its tributaries. Juveniles migrate from spawning grounds to the Pacific Ocean.   | Spawning occurs in large deep pools in tributaries with moderate velocities and a large bubble curtain at the head.   | Consult Agency | <b>No.</b> The project site has no suitable habitat and occurs outside of the known range of this species. |
| <i>Oncorhynchus tshawytscha</i><br>Chinook salmon<br>winter-run, Sacramento River | FE/CE/--  | Spawn in the upper Sacramento River. Juveniles migrate from spawning grounds to the Pacific Ocean.   | Returns to the Upper Sacramento River in the winter but delay spawning until spring and summer. Juveniles spend 5-9 months in the river and estuary before entering the ocean.  | Consult Agency | <b>No.</b> The project site has no suitable habitat and occurs outside of the known range of this species. |
| <i>Pogonichthys macrolepidotus</i><br>Sacramento splittail                        | --/CSC/-- | Native to low-elevation waters in the Central Valley of California, with current range centered on the San Francisco Estuary.  | Tolerant of moderate levels of salinity and/or alkalinity. Spawning occurs in flooded vegetation, including the Yolo Bypass.  | Consult Agency | <b>No.</b> The project site has no suitable habitat and occurs outside of the known range of this species. |
| <b>Amphibians</b>   |           |  |   |                |  |
| <i>Ambystoma californiense</i><br>California tiger salamander                     | FE/ST/--  | Known to occur in Sonoma county.   | Inhabits low-elevation grassland and oak savanna habitats. Breeds in winter and spring in vernal pools and ponds and spends summer and fall in underground burrows in upland around pools.  | All Year       | <b>No.</b> The project site is outside the known range of this species.                                    |

|   |           |   |  |                 |  |
|---|-----------|---|--|-----------------|--|
| <i>Rana draytonii</i><br>California red-legged frog | FT/CSC/-- | Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges (DFG 2012).  | Lowlands and foothills in or near relatively permanent sources of deep water for breeding; nonbreeding frogs may be found in uplands within 300 feet of breeding ponds or at other wet/moist areas. Prefers but does not require dense shoreline vegetation. Elevation usually below 1200 meters (DFG 2012).   | All Year        | <b>No.</b> Suitable habitat for this species does not occur within the project site. |
| <i>Spea hammondi</i><br>Western spadefoot toad      | --/CSC/-- | Endemic to California. Ranges from near Redding in the north throughout the Great Valley and surrounding foothills and south into Baja California.  | Prefers open areas with sandy or gravelly soils in a variety of habitats, including mixed woodlands, grasslands, coastal sage scrub, chaparral, river floodplains, alluvial fans. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding. This toad is terrestrial, and only enters water for breeding.  | All Year        | <b>No.</b> Suitable habitat for this species does not occur within the project site. |
| <b>Reptiles</b>                                     |           |   |  |                 |  |
| <i>Actinemys marmorata</i><br>western pond turtle   | --/CSC/-- | West coast of North America from southern Washington, USA to northern Baja California, Mexico. Many populations have been extirpated and others continue to decline throughout the range, especially in southern California.              | Requires aquatic habitats with suitable basking sites. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.   | All year        | <b>No.</b> There is no suitable habitat for this species on the project site.        |
| <i>Thamnophis gigas</i><br>giant garter snake       | FT/CT/--  | Endemic to the San Joaquin and Sacramento Valley floors. Counties include Butte, Colusa, Contra Costa, Fresno, Glenn, Kern, Madera, Merced, Sacramento, San Joaquin, Solano, Sutter, Yolo, and Yuba.                                      | Inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Requires adequate water during its active season (early spring through mid-fall) to provide food and cover, emergent, herbaceous wetland vegetation for foraging and cover, grassy banks and openings in waterside vegetation for basking, and higher elevation uplands for cover and refuge from flood waters during its dormant season (winter). Inhabits small mammal burrows and other soil crevices with sunny exposure along south and west facing slopes, above prevailing flood elevations when dormant. | March - October | <b>No.</b> The project site occurs outside of the known range of this species.       |
| <b>Birds</b>  |           |   |  |                 |  |
| <i>Agelaius tricolor</i><br>tricolored blackbird    | --/CSC/-- | Restricted to the Central Valley and surrounding foothills, throughout coastal and some inland localities in southern California, and scattered sites in Oregon, western Nevada, central Washington, and western coastal Baja California. | Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water.  | All Year        | <b>No.</b> There is no suitable habitat for this species on the project site.        |

|   |           |  |   |                 |  |
|---|-----------|--|---|-----------------|--|
| <i>Athene cunicularia</i><br>Burrowing owl                              | --/CSC/-- | Formerly common within the described habitats throughout the state except the northwest coastal forests and high mountains.  | Yearlong resident of open, dry grassland and desert habitats, as well as in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats.  | All Year        | <b>No.</b> There is no suitable habitat for this species on the project site.  |
| <i>Buteo swainsoni</i><br>Swainson's hawk                               | --/CT/--  | In California, breeds in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, Antelope Valley, and in eastern San Luis Obispo County.            | Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent populations.   | March – October | <b>Yes.</b> See text.  |
| <i>Coccyzus americanus occidentalis</i><br>Western yellow-billed cuckoo | FC/CE/--  | In California, this species is known or believed to occur in Del Norte, Humboldt, Mendocino, Siskiyou and Trinity Counties (USFWS 2012)  | Extensive, deciduous riparian thickets or forests with dense, low-level understory foliage, on larger river systems. Nests in sites larger than 300 ft. wide and 25 acres in area.  | June-September  | <b>No.</b> There is no suitable habitat for this species on the project site; project site is outside geographic range for this species. |
| <i>Progne subis</i><br>Purple martin                                    | --/CSC/-- | Migrate to South America for winter. Return to temperate North America for summer.   | Nest in cavities, either artificial or natural. When not breeding, they often roost together in large flocks.   | All Year        | <b>No.</b> There is no suitable habitat for this species on the project site.  |
| <i>Riparia riparia</i><br>bank swallow                                  | --/CT/--  | In California, primarily nests from Siskiyou, Shasta and Lassen Counties, south along the Sacramento River to Yolo County. Also nests locally across much of state.  | Found primarily in riparian and other lowland habitats west of the deserts during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes.   | April - July    | <b>No.</b> There is no suitable habitat for this species on the project site.  |
| <b>Habitats</b>   |           |  |   |                 |  |
| Alkali Meadow   |           | Found primarily in the Eastern Sierra, with small fragmented habitat in the southern Central Valley.   | Occurs in areas where the water table is shallow (below three meters) and the soils are alkaline. Characteristic vegetation includes native grasslands (sacaton, <i>Sporobolus airoides</i> and saltgrass, <i>Distichlis spicata</i> ) and perennial herbs (alkali cordgrass, <i>Spartina gracilis</i> ).   | N/A             | <b>No.</b> The soils are not alkaline and the project site is outside the geographic distribution of this habitat.                       |
| Great Valley Mixed Riparian Forest                                      |           | Floodplains of low-gradient, depositional streams of the Great Valley, usually below about 500 feet. Formerly very extensive in the Sacramento and northern San Joaquin valleys, this forest largely has been cleared for agriculture, flood control, and urban expansion. | This is a tall, dense, winter-deciduous, broadleaved riparian forest. The tree canopy usually is fairly well closed and moderately to densely stocked. Relatively fine-textured alluvium somewhat back from active river channels. These sites experience overbank flooding (with abundant alluvial deposition and groundwater recharge) but not overly severe physical battering or erosion. | N/A             | <b>Yes.</b> See text.  |
| Northern Claypan Vernal Pool  |           | On lower terraces and basin rims, toward the valley trough compared to Northern Hardpan Vernal Pools; Central San Joaquin Valley north to Glenn and Colusa counties.   | Fairly old, circum-neutral to alkaline, Si-cemented hardpan soils. Often more or less saline. Intergrades via Vernal Marsh with Cismontane Alkali Marsh, which has water present throughout the year.   | N/A             | <b>No.</b> The project site is not saline and this habitat was not observed during site surveys.   |

|                              |  |  |   |     |   |
|------------------------------|--|--|---|-----|---|
| Northern Hardpan Vernal Pool |  | Primarily on old alluvial terraces on the east side of the Great Valley from Tulare or Fresno County north to Shasta County (UCSB 2012). | Old, very acidic, Fe-Si cemented hardpan soils (Redding, San Joaquin, and similar series). The microrelief on these soils typically is hummocky, with mounds intervening between localized depressions. Winter rainfall perches on the hardpan, forming pools in the depressions. Evaporation (not runoff) empties the pools in spring (UCSB 2012). | N/A | <b>No.</b> The soils on the project site are not suitable to this habitat type. |
|------------------------------|--|--|---|-----|---|

**STATUS CODES**

**FEDERAL: United States Fish and Wildlife Service**

- FC Candidate for Federal Listing
- FE Federally Endangered
- FT Federally Threatened

**STATE: California Department of Fish and Game**

- CE California Listed Endangered
- CSC California Species of Special Concern
- FP California Fully Protected Species

**CNPS: California Native Plant Society**

- List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
- List 2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

SOURCE: USFWS 2012; CDFG 2003; CNPS 2012, NatureServe 2012.

# ***Appendix C***

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**CULTURAL RESOURCES DOCUMENTATION**

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**CONFIDENTIAL CULTURAL RESOURCES REPORT  
(BOUND SEPARATELY)**

**CULTURAL RESOURCES REPORT  
BOUND SEPARATELY\***

\*The Cultural Resource Report has been bound separately to protect potentially sensitive information about the location and nature of cultural resources.

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## **CULTURAL RESOURCES CONSULTATION**



ANALYTICAL ENVIRONMENTAL SERVICES

December 18, 2012

Debbie Pilas-Treadway  
Native American Heritage Commission  
915 Capitol Mall, Rm. 364  
Sacramento, CA 95814  
Fax: (916) 657-5390

**RE: Fish Screening Project for Family Water Alliance**

Dear Ms. Pilas-Treadway:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We respectfully request a check of the Sacred Lands files for the project area and a list of appropriate Native American contacts for consultation.

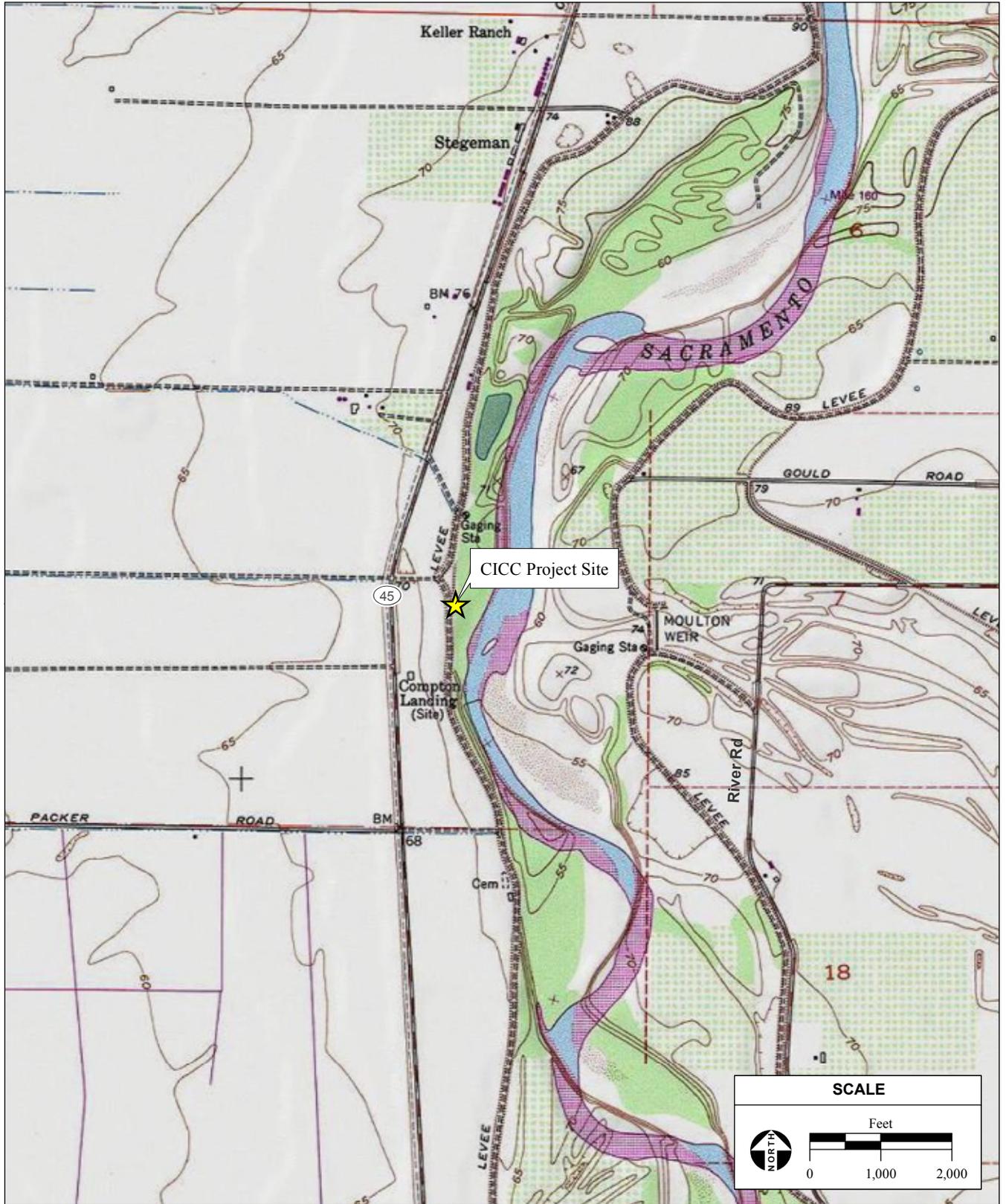
The Family Water Alliance Fish Screening Project is located in two locations. The first is in Colusa County, approximately nine miles north of the City of Colusa along the Sacramento River. This site is found within an unsectioned area of Township 17 North, Range 2 West, of the Moulton Weir U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached as **Figure 2a**). The second project site is in Placer County, approximately 5.4 miles west of the City of Lincoln along the Auburn Ravine. This site is located within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove USGS 7.5-minute topographic quad (attached as **Figure 2b**).

The Project seeks to screen existing agricultural diversions for protection of endangered and threatened fish species. The Sacramento River is U.S. Fish and Wildlife Service (USFWS) designated critical habitat for the Central Valley steelhead (*Oncorhynchus mykiss*) and chinook salmon (*Oncorhynchus tshawytscha*), and the Auburn Ravine is USFWS-designated critical habitat for the Central Valley steelhead. The installation of the fish screens will improve wildlife corridors for migrating fish and protect them from entrapment in unsuitable agricultural diversion ditches.

Thank you for your assistance in this matter. If you have any questions, please feel free to contact me directly.

Sincerely,

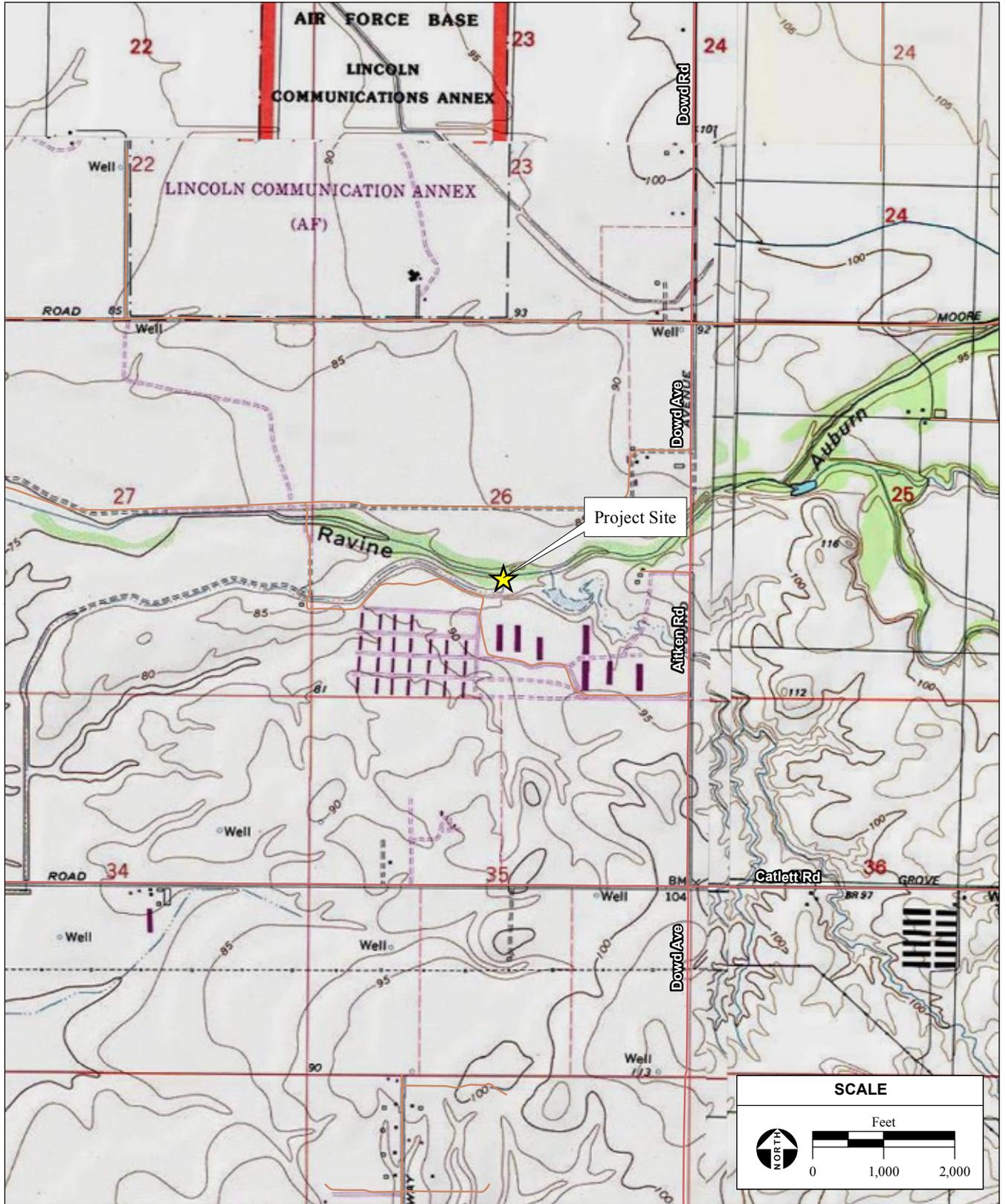
Annalee Sanborn  
Environmental Analyst  
Enc.



SOURCE: "Moulton Weir, CA" USGS 7.5 Minute Topographic Quadrangle, T17N R2W, Unsectioned Area of Larkins Childrens Rancho, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance CICC Initial Study / 212503 ■

**Figure 2**  
Site and Vicinity



SOURCE: "Pleasant Grove, CA" USGS 7.5 Minute Topographic Quadrangle, T12N R5E, Section 26, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 2**  
Site and Vicinity

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390



December 28, 2012

Annalee Sanborn  
Analytical Environmental Services  
1801 7<sup>th</sup> Street, Ste 100  
Sacramento 95811

Sent by Fax 916-447-1665  
Number of Pages: 5

Re: Fish Screening for Family Water Alliance, Placer & Colusa Counties

Dear Ms. Sanborn :

A search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact.

The NAHC makes no recommendation or preference of any single individual, or group over another. All of those on the list should be contacted, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: [rw\\_nahc@pacbell.net](mailto:rw_nahc@pacbell.net)

Sincerely,

A handwritten signature in black ink that reads "Rob Wood".

Rob Wood  
Associate Government Program Analyst

**Native American Contact List**  
**Placer County**  
**December 27, 2012**

Shingle Springs Band of Miwok Indians  
 Sam Daniels, Vice Chairperson  
 P.O. Box 1340  
 Shingle Springs , CA 95682  
 (530) 676-8010  
 (530) 676-8033 Fax

Miwok  
 Maidu

T'Si-akim Maidu  
 Grayson Coney, Cultural Director  
 P.O. Box 1316  
 Colfax , CA 95713  
 akimmaidu@att.net  
 (530) 383-7234

Maidu

Rose Enos  
 15310 Bancroft Road  
 Auburn , CA 95603  
 (530) 878-2378

Maidu  
 Washoe

United Auburn Indian Community of the Auburn Rancheria  
 Marcos Guerrero, Tribal Preservation Committee  
 10720 Indian Hill Road  
 Auburn , CA 95603  
 mguerrero@auburnrancheria.com  
 530-883-2364  
 530-883-2320 - Fax

Maidu  
 Miwok

United Auburn Indian Community of the Auburn Rancheria  
 David Keyser, Chairperson  
 10720 Indian Hill Road  
 Auburn , CA 95603  
 530-883-2390  
 530-883-2380 - Fax

Maidu  
 Miwok

April Wallace Moore  
 19630 Placer Hills Road  
 Colfax , CA 95713  
 530-637-4279

Nisenan - So Maidu  
 Konkow  
 Washoe

T si-Akim Maidu  
 Eileen Moon, Vice Chairperson  
 1239 East Main St.  
 Grass Valley , CA 95945  
 530-274-7497

Maidu

Shingle Springs Band of Miwok Indians  
 Daniel Fonseca, Cultural Resource Director  
 P.O. Box 1340  
 Shingle Springs , CA 95682  
 (530) 676-8010  
 (530) 676-8033 Fax

Miwok  
 Maidu

Shingle Springs Band of Miwok Indians  
 Nicholas Fonseca, Chairperson  
 P.O. Box 1340  
 Shingle Springs , CA 95682  
 nfonseca@ssband.org  
 (530) 676-8010  
 (530) 676-8033 Fax

Miwok  
 Maidu

Colfax-Todds Valley Consolidated Tribe  
 Judith Marks  
 1068 Silverton Circle  
 Lincoln , Cali 95648  
 916-670-5714  
 916-434-7876 - home

Miwok  
 Maidu

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Fish Screening Project for Family Water Alliance, Pleasant Grove USGS Quadrangle, Placer County

**Native American Contact List  
Placer County  
December 27, 2012**

United Auburn Indian Community of the Auburn Rancheria

Danny Rey, THPO

10720 Indian Hill Road

Auburn, CA 95603

Maidu

Miwok

dannyr@auburnrancheria.com

916-368-9742 - cell

530-883-2390

530-888-5476 - Fax

**This list is current only as of the date of this document.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Fish Screening Project for Family Water Alliance, Pleasant Grove USGS Quadrangle, Placer County**

**Native American Contact List  
Colusa County  
December 27, 2012**

Cortina Wintun Environmental Protection Agency  
P.O. Box 1630 Wintun (Patwin)  
Williams, CA 95987  
corwepa@yahoo.com  
(530) 473-3318  
(530) 473-3319  
(530) 473-3301 - Fax

Cortina Band of Indians  
Charlie Wright, Chairperson  
PO Box 1630 Wintun / Patwin  
Williams, CA 95987  
(530) 473-3274 - Voice  
(530) 473-3190 - Voice  
(530) 473-3301 - Fax

Grindstone Rancheria of Wintun-Wailaki  
Ronald Kirk, Chairperson  
P.O. Box 63 Nomlaki  
Elk Creek, CA 95939 Wintun (Patwin)  
(530) 968-5365 Wailaki  
(530) 968-5366 FAX Muimok

Cortina Band of Indians  
Thelma Brafford, Tribal Administrator  
P.O. Box 1630 Wintun/Patwin  
Williams, CA 95987  
rezdog37@yahoo.com  
(530) 473-3274  
(530) 437-3301 FAX

Colusa Indian Community Council  
Daniel Gomez, Chairman  
3730 Highway 45 Wintun (Patwin)  
Colusa, CA 95932  
(530) 458-8231  
530-458-4186

Colusa Indian Community Council  
Wayne R. Mitchum, Jr  
3730 Hiway 45 Wintun (Patwin)  
Colusa, CA 95932  
530-458-8231  
530-458-4186

Paskenta Band of Nomlaki Indians  
Andrew Freeman, Chairperson  
PO Box 398 Nomlaki  
Orland, CA 95963 Wintun  
office@paskenta.org  
(530) 865-2010  
(530) 865-1870 Fax

Kesner Flores  
PO Box 1047 Wintun / Patwin  
Wheatland, CA 95692  
calnagpra@hotmail.com  
925-586-8919

Yocha Dehe Wintun Nation  
Marshall McKay, Chairperson  
P.O. Box 18 Wintun (Patwin)  
Brooks, CA 95606  
(530) 796-3400  
(530) 796-2143 Fax

Yocha Dehe Wintun Nation  
Leland Kinter, Native Cultural Renewal Committee  
P.O. Box 18 Wintun (Patwin)  
Brooks, CA 95606  
lkinter@yochadehe-nsn.gov  
(530) 979-6346  
(530) 796-3400 - office  
(530) 796-2143 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Fish Screening Project for Family Water Alliance, Moulton Weir USGS Quadrangle, Colusa County

**Native American Contact List  
Colusa County  
December 27, 2012**

Yocha Dehe Wintun Nation  
Cynthia Clarke, Native Cultural Renewal Committee  
P.O. Box 18 Wintun (Patwin)  
Brooks, CA 95606  
(530) 796-3400 - office  
(530) 796-2143 Fax

Grindstone Rancheria of Wintun-Wailaki  
Regina Dock  
P.O. Box 63 Nomlaki  
Elk Creek, CA 95939 Wintun (Patwin)  
(530) 968-5365 Wailaki  
(530) 968-5366 FAX Muimok

Yocha Dehe Wintun Nation  
Reno Franklin, Cultural Resources Director  
P.O. Box 18 Wintun (Patwin)  
Brooks, CA 95606  
rfranklin@yochadehe-nsn.gov  
(530) 979-6346  
(530) 796-3400 - office  
(530) 796-2143 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Fish Screening Project for Family Water Alliance, Mouton Weir USGS Quadrangle, Colusa County



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

April Wallace Moore  
19630 Placer Hills Road  
Colfax, CA 95713

RE: Family Water Alliance Fish Screen Program

To Ms. Moore:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Daniel Fonseca  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 95682

RE: Family Water Alliance Fish Screen Program

To Mr. Fonseca:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

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Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Danny Rey  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

RE: Family Water Alliance Fish Screen Program

To Mr. Rey:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

David Keyser  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

RE: Family Water Alliance Fish Screen Program

To Chairperson Keyser:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Eileen Moon  
T'Si-Akim Maidu  
1239 East Main Street  
Grass Valley, CA 95945

RE: Family Water Alliance Fish Screen Program

To Ms. Moon:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Grayson Coney  
T'Si-akim Maidu  
P.O. Box 1316  
Colfax, CA 95713

RE: Family Water Alliance Fish Screen Program

To Mr. Coney:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Judith Marks  
Colfax-Todds Valley Consolidated Tribe  
1068 Silverton Circle  
Lincoln, CA 95648

RE: Family Water Alliance Fish Screen Program

To Ms. Marks:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Marcos Guerrero  
United Auburn Indian Community of the Auburn Rancheria  
10720 Indian Hill Road  
Auburn, CA 95603

RE: Family Water Alliance Fish Screen Program

To Mr. Guerrero:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Nicholas Fonseca  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 95682

RE: Family Water Alliance Fish Screen Program

To Mr. Fonseca:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

December 31, 2012

Rose Enos  
15310 Bancroft Road  
Auburn, CA 95603

RE: Family Water Alliance Fish Screen Program

To Ms. Enos:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



ANALYTICAL ENVIRONMENTAL SERVICES

January 2, 2012

Sam Daniels  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 95682

RE: Family Water Alliance Fish Screen Program

To Mr. Daniels:

Analytical Environmental Services (AES) is conducting a cultural resources study in support of the above referenced project. We would like to request any information you may have regarding Native American cultural resources within or adjacent to the project sites.

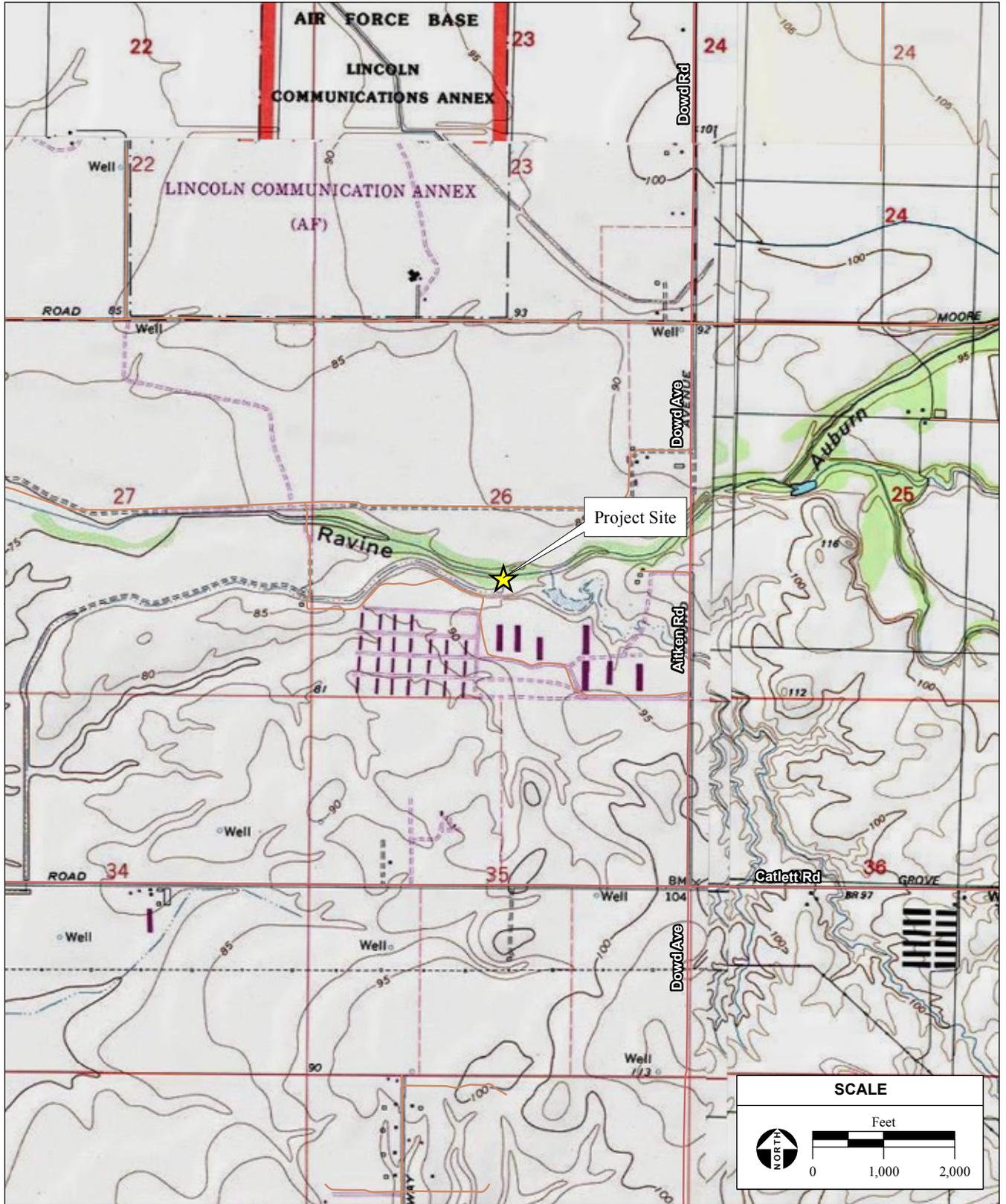
The South Sutter Water District (SSWD) project is located approximately five miles west of the City of Lincoln in Placer County, California. The project is within Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian (attached). This project seeks to install a fish screen at the entrance of the existing agricultural diversion, the Pleasant Grove Canal, for the protection of endangered fishes.

If you have any questions or concerns, or need more information, please feel free to contact me directly. Thank you for your assistance in this matter. Correspondence may be faxed or mailed to AES.

Sincerely,

Annalee Sanborn  
Environmental Analyst

Attachment: Figure 2, Site and Vicinity



SOURCE: "Pleasant Grove, CA" USGS 7.5 Minute Topographic Quadrangle, T12N R5E, Section 26, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 2**  
Site and Vicinity

# ***Appendix D***

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**INTAKE SCREEN, INC. ENVIRONMENTAL ANALYSIS OF PILE  
DRIVING IMPACTS ON FISHERY RESOURCES**

**Intake Screens, Inc.**  
**Generalized for Typical Fish Screen Project Installation**  
**Environmental Analysis of Pile Driving Impacts on Fishery Resources**

**Typical Description of Project Construction & Components:**

The self-cleaning fish screen and retrieval system, as well as all related support structures, protection features, and structure modifications will be designed and installed by Intake Screens, Inc. (ISI). The new intake will replace the existing unscreened diversion with a state of the art fish protection screen system. The existing pumps, motors, and electrical equipment, will be removed, if needed, for the installation of the fish screen system. New piles may be needed and/or added to assist in the support of the retrieval track, screen, intake adapter/docking inlet, and the new debris boom.

The screens will be designed for retrieval during non-diversion periods, high river flows or routine maintenance. The fish screens will be mounted on the retrieval track to allow it to be moved up and down the track using a winch system. The screen unit is designed to seat over the docking inlet when lowered into place and then be locked at the top of the track for service or inspection. The proposed configuration is shown on the attached plan. The proposed construction will require that the pumps be removed during construction

Construction activities can/may include: 1) Removal of the pumps, motors, controls, pipes, and existing support structure by crane; 2) Pile driving of support pilings (approximate 6 to 12-inch diameter) by land based crane; 3) Excavation of material in the river under the existing pumps and adjacent to the intake area, if necessary, for placement of intake adapter/docking inlet; 4) Modification of the existing platform, if needed to support the screen during non-use; 5) Placement of , intake adapter/docking inlet, track, screen, and related support work by crane; 6) Metal erection both underwater (with divers) and above water; 7) Control panel and HPU hook-up; and 8) replacement of existing pump and electrical equipment and reconnection of discharge pipelines.

This fish screen system will prevent endangered and threatened fish species within the Sacramento River system from being entrained by water diversion or irrigation, including federally listed salmonids and green sturgeon.

ISI's intake screen and system will be fabricated and installed to meet federal and State fish screen criteria at full pumping capacity at the lowest expected water levels, given the site constraints of shallow water. This fish screen system will provide long-term beneficial effects to these species and their critical habitats, as it creates a safer passageway for migrating salmonids and sturgeon.

**Description of Piles and Pile Driving Activities**

Intake Screens, Inc. (ISI) typically drives a number of in-water support pilings for the installation of fish screens on various diversions located on the Sacramento River system and Delta region (while utilizing existing piles when they are in a condition suitable to be reused).

Pile driving activities normally occur between August 1 through October 15<sup>th</sup>. ISI typically is able to drive between six (6) and ten (10) piles per day from a land-based crane utilizing 6-inch to 12-inch Standard Schedule 40 steel pipe pilings, with pile penetrations expected up to 40 feet below the existing ground

surface. All pilings are normally driven in less than 10-feet of water and into a silt and stiff clay river bottom material.

**Pile Driver Information**

ISI will be utilizing an APE Model 64X Vibratory Extractor pile driver for installation of support pilings on 2012 fish screen projects (see attached driver specifications).

Vibratory hammers use oscillatory hammers that vibrate the pile, causing the sediment surrounding the pile to liquefy and allow pile penetration. Peak sound pressure levels for vibratory hammers can exceed 180 dB; however, the sound from these types of hammers rises relatively slowly. The vibratory hammer produces sound energy that is spread out over time and is generally 10 to 20 dB lower than impact pile driving.

Vibratory hammers can be feasible and utilized for pile installation, but it is typical that piles need to be proofed (i.e., tested for bearing capacity and structural integrity) with an impact pile driver. The project engineer may find it necessary to proof pilings using an impact type pile driver, but past experience has shown it has not been needed.

**Noise Criteria**

NMFS approved criteria for injury to fish from pile driving activities are 206dB peak and 187dB accumulated SEL for all fish greater than 2 grams. These criteria were developed based on scientific evaluation and are considered to be very conservative (Popper, et al. 2006). For example, assumptions number four in Appendix A of Popper, et al. (2006) states that the SEL criterion is based on exposure of fish weighing 0.01g. Furthermore, data from Hasting and Popper (2005) suggest that the “no injury” level for 0.01g occurs at 193dB SEL.

The Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish (Caltrans 2009) summarizes anticipated unattenuated sound pressures for in-water pile driving using vibratory hammers. Based on the type of pile to be used for installation and the shallow site conditions (12-inch steel pipe pile), the peak and accumulated sound pressures are anticipated to be:

**Vibratory hammer: 192dB peak and 177dB accumulated**

The anticipated peak and accumulated sound pressure levels are below the threshold to injure fish (Table 1):

| Table 1. Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities |                 |  |
|--|-----------------|--|
|  | Peak (<2g/60mm) | Accumulated (<2g/60mm)   |
| Interim Criteria for Injury <sup>1</sup>   | 206 dB          | 187 dB - for fish size of two grams or greater.<br><br>183 dB 0 for fish of less than two grams* |
| Anticipated Vibratory  | 192 dB          | 177 dB   |

|   |  |  |
|---|--|--|
| Hammer (12" Steel Pipe) <sup>2</sup>  |  |  |
| Source:<br><sup>1</sup> Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities. June 12, 2008 (attached).<br><sup>2</sup> Caltrans 2009. |  |  |

Piles less than Standard 12-inch diameter are significantly less than the values shown above and many of the fish screen projects will be using smaller piles, such as 6-inch, if applicable to the project.

### Impact Assessment

Pile Driving Effects on Potential Prey (Fish): Construction activities will produce both pulsed (i.e., impact pile driving) and continuous (i.e., vibratory pile driving) sounds. Fish react to sounds which are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005, 2009) identified several studies that suggest fish may relocate to avoid certain areas of noise energy. Additional studies have documented effects of pile driving (or other types of continuous sounds) on fish, although several are based on studies in support of large, multiyear bridge construction projects (Scholik and Yan 2001, 2002; Govoni et al. 2003; Hawkins 2005; Hastings 1990, 2007; Popper et al. 2006; Popper and Hastings 2009). Sound pulses at received levels of 160 dB re 1 µPa may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Chapman and Hawkins 1969; Pearson et al. 1992; Skalski et al. 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality (CALTRANS 2001; Longmuir and Lively 2001). The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

Pile Driving Effects on Potential Foraging Habitat: In addition, the area likely impacted by the pile driving associated with fish screen installation is relatively small. Potentially a maximum of 1.82 m (19.6 ft); based on a 60 in [1.5 m] diameter pile) of species foraging habitat may have decreased foraging value as each pile is driven. Avoidance by potential prey (i.e., fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

### Measures to Further Reduce Potential Impacts to Fish

Soft Start: The use of a soft-start procedure is believed to provide additional protection to fish species by warning, or providing fish species a chance to leave the area prior to the hammer operating at full capacity. The pile driving engineer will utilize soft-start techniques (ramp-up and dry fire) recommended by NMFS for impact and vibratory pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for fifteen seconds at reduced energy followed by a one minute waiting period. This procedure will be repeated two additional times.

Daylight Construction: Pile driving will only be conducted between two hours post-sunrise through two hours prior to sunset (civil twilight), between the periods of August 1<sup>st</sup> – October 15<sup>th</sup>. Should fish species be detected during pile driving, all pile driving activities will be ceased until fish exit project area.

# ***Appendix E***

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## **FISH AVOIDANCE PLAN**

# FISH AVOIDANCE PLAN

---

## 1.0 BACKGROUND

Diversions from rivers have the potential to substantially affect biological resources, including Steelhead trout (*Oncorhynchus mykiss*), winter run and spring run Chinook salmon (*Oncorhynchus tshawytscha*), green sturgeon (*Acipenser medirostris*), warm water fish species, and other terrestrial or aquatic species of special concern. Existing diversions from rivers often use flashboards within the main channel, and screening the entrances to these diversions can prevent fish entrapment or mortality within the side channels and will ensure fish passage on the mainstem river. The fish screen installation process includes the installation of a sheetpile barrier which, in the absence of avoidance measures, may have the capacity to trap any fish present during and subsequent to the construction process. Fish restrained behind the barrier would no longer be capable of accessing the main stem of the river. They may be more susceptible to other dangers associated with construction, including increased risk of predation mortality, exposure to increased turbidity and closer proximity to potentially damaging sound pressure waves. Low impact measures will be utilized to encourage fish to evacuate the construction area and to prevent their return during installation of the earthen barrier and other construction activities. To prevent listed aquatic species such as Steelhead trout from becoming entrapped behind the barrier, a fish avoidance procedure may also be utilized as a protective measure to ensure fish survival.

The following Fish Avoidance Plan shall be implemented if there is water present in the canal that fish could potentially be present in. If the canal is dry, then there is no need to implement the fish avoidance procedures described below, as no fish species would be impacted.

## 2.0 SOUTH SUTTER WATER DISTRICT PROJECT

The South Sutter Water District (SSWD) is proposing to screen its existing diversion off the Auburn Ravine. This Fish Avoidance Plan was designed as a requirement of the Initial Study/Mitigated Negative Declaration (IS/MND) that analyzed a range of potential environmental effects for the SSWD Pleasant Grove Canal Fish Screen Project (Proposed Project). The Pleasant Grove Canal is located off the main channel, and water is currently diverted into the canal through the use of flashboards across the mainstem Auburn Ravine. As part of the construction process, sheetpile will be installed across the canal opening and two fish screens will be installed at the mouth of the canal, so that screened water will enter the Pleasant Grove Canal without inhibiting fish passage on the Auburn Ravine. The Auburn Ravine is listed as critical habitat by the U.S. Fish and Wildlife Service (USFWS) for Central Valley steelhead (*O. mykiss*).

## **3.0 FISH AVOIDANCE PLAN**

### **3.1 LOW IMPACT ACTIVITY AND FISH COUNT**

Steelhead trout tend to avoid areas of activity. An initial approach, prior to the initiation of full-scale construction activities, would be to engage in low impact activity in the area which would encourage any adult fish using the area to move to a new location. Immediately prior to construction, technicians should conduct a visual survey for anadromous salmonids and other fish species by walking or snorkeling within the channel and using a counting device to record the number of fish visually observed. The visual surveys will be performed twice. The first survey will serve as a baseline and a second survey will check the accuracy of the first survey.

Should fish continue to be present in the area scheduled for construction, additional fish avoidance procedures will have to be implemented to save these individuals before the sheetpile barriers are fully installed.

### **3.2 CROWDING NET**

The use of fish seining prior to dredging has been employed in the past as part of the Streambed Alteration Agreement (SAA) process. If the visual surveys indicate the presence of adult trout within the construction area, a seine will be used to crowd the fish towards the outlet of the channel and back into the river. A block net, or a second seine, will prevent reentry of fish into the project site.

Begin by placing the crowding seine across the width of the channel as near as possible to the closed end. The net should be tall enough to span the entire vertical water column of the canal, and should be weighted at the bottom to ensure proper position within the channel and to prevent fish from escaping underneath the net or around the edges. The net will be moved towards the downstream end of the channel so that fish are corralled into the main course of the river.

The net may need to be maneuvered differently depending on the channel depth. In shallow water that is easily waded, the edges of the net can be moved by qualified staff positioned within the canal. The net will need to be managed by several technicians, including people to move the ends of the net and to monitor the central sections for breaches where fish may escape. In deeper water, the net may need to be maneuvered using other equipment such as motor driven rafts or boats.

After the first pass of the seine, a block net will be installed securely across the mouth of the channel so that it is positioned outside of the future location of the earthen barrier. The block net will act to prevent fish from reentering the project site and can be composed of the original seine used for the first pass or a separate net designated for this purpose. The block net will remain in place until the construction of the earthen barrier is complete.

Use additional seine passes to crowd and evacuate remaining fish trapped behind the block net. As the seine is maneuvered towards the mouth of the channel, the block net may be temporarily

moved aside to allow fish to escape the crowded area and swim into the main stem of the river. A snorkel crew should then conduct another visual survey to determine if fish remain within the channel. The process of inspection, crowding, and fish removal should be repeated until no fish are observed during the visual survey. The block net may be removed once construction of the earthen barrier is complete.

If this process is not fully successful then, as a last resort, trapped fish may also be removed using large, long-handled dip nets. If any of the remaining trapped fish are identified as listed species a consultation shall be undertaken with the fisheries agencies prior to the use of dip nets. Any fish netted shall be placed on the river side of the barrier net using the least invasive means possible and the time in the net shall be minimized. Fish should not be handled, captured or taken. Should a modification to these procedures become necessary, the California Department of Fish and Wildlife (CDFW) and other appropriate fisheries agencies shall be consulted prior to additional action.

#### **4.0 REPORTING REQUIREMENTS**

Upon the completion of the fish rescue and salvage activities, a Fish Salvage Operation Report will be submitted to NOAA Fisheries, CDFW, and USFWS. The report will document the procedures implemented to avoid fish and will include information on the number of fish salvaged and the type and size of fish and special-status fish salvaged. The project proponents will respond to any comments by agencies, including those listed above, on the initial report and submit a finalized version in order to comply with appropriate reporting requirements.

# RECLAMATION

*Managing Water in the West*

## **BIOLOGICAL ASSESSMENT For Anadromous Fish**

**South Sutter Water District  
Pleasant Grove Canal Fish Screen Project**

Project Location  
38°51'29" North and 121°23'10" West  
Placer County

May 2014

# Table of Contents

|  |           |
|--|-----------|
| <b>CHAPTER 1 INTRODUCTION AND SPECIES CONSIDERED</b>                     | <b>3</b>  |
| 1.1 Purpose of the Biological Assessment                                 | 3         |
| 1.2 Species Considered   | 5         |
| 1.3 Critical Habitat   | 5         |
| 1.4 Essential Fish Habitat   | 6         |
| 1.5 Authorities and Scope of Discretion                                  | 6         |
| <b>CHAPTER 2 PROPOSED ACTION</b>   | <b>6</b>  |
| 2.1 Proposed Action Area   | 6         |
| 2.2 Description of Proposed Action                                       | 7         |
| 2.3 Project Components   | 8         |
| <b>CHAPTER 3 ENVIRONMENTAL BASELINE</b>                                  | <b>9</b>  |
| 3.1 Potentially Affected Listed Species and Associated Critical Habitats | 10        |
| 3.1.1 Central Valley Spring-Run Chinook Salmon                           | 10        |
| 3.1.2 Sacramento River Winter-Run Chinook Salmon                         | 11        |
| 3.1.3 California Central Valley Steelhead                                | 12        |
| <b>CHAPTER 4 EFFECTS OF THE PROPOSED ACTION</b>                          | <b>14</b> |
| 4.1 Direct Effects Analysis for Salmonids                                | 14        |
| 4.2 Indirect Effects on Salmonids  | 16        |
| 4.3 Interrelated and Interdependent Effects on Salmonids                 | 16        |
| 4.4 Effects on Listed Species Critical Habitat and Salmonid Species EFH  | 16        |
| 4.5 Determination of Effects   | 16        |
| <b>CHAPTER 5 REFERENCES</b>  | <b>17</b> |
| <b>APPENDICES</b>  | <b>19</b> |
| Appendix A Construction Drawings   |           |
| Appendix B Noise Impact Analysis   |           |

## Chapter 1 Introduction and Species Considered

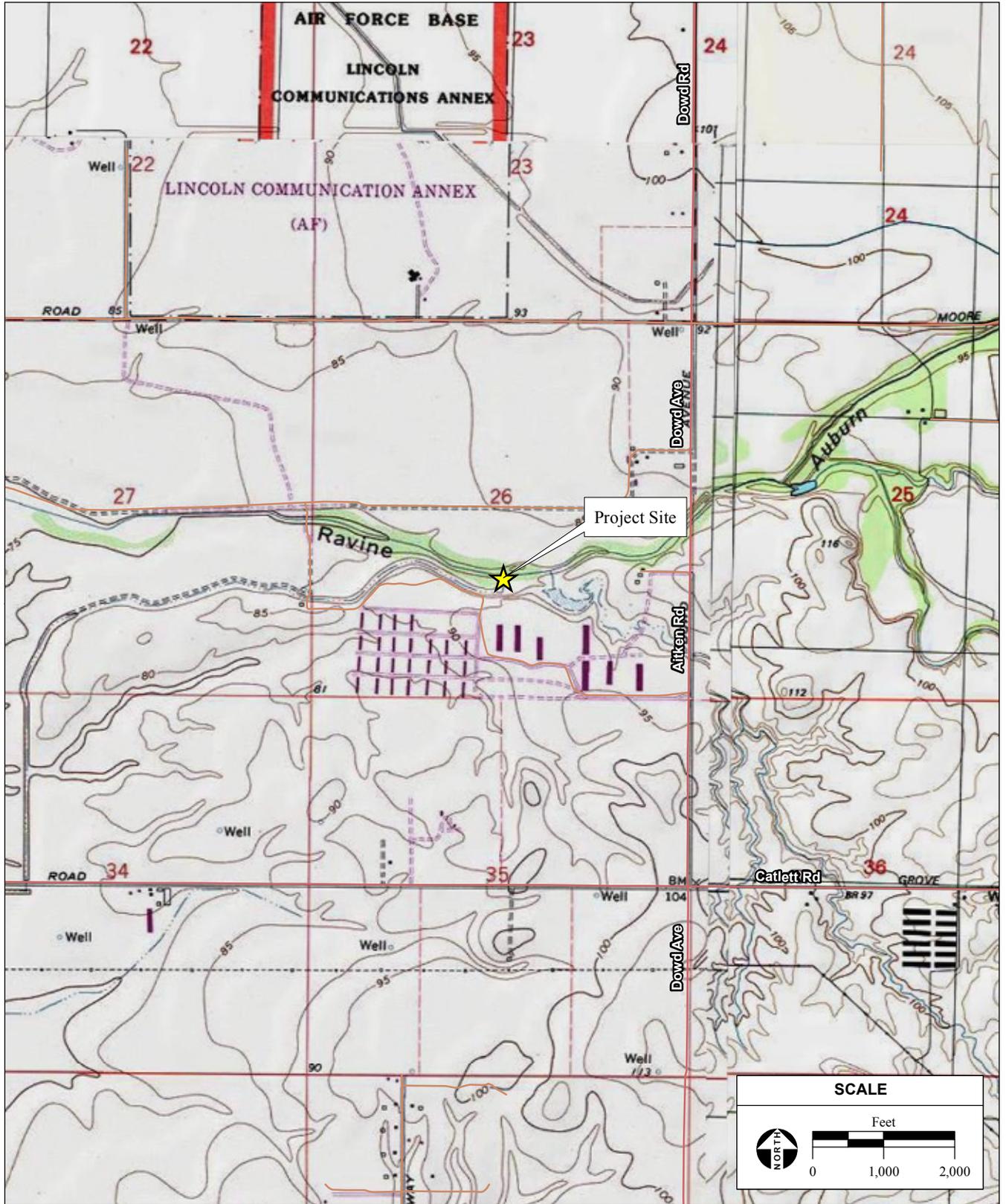
The Bureau of Reclamation (Reclamation), through the Anadromous Fish Screen Program (AFSP), proposes to provide federal funding to the South Sutter Water District (SSWD) to screen their existing unscreened 80 cubic feet per second (cfs) diversion (Proposed Action). SSWD's diversion is on Auburn Ravine, located approximately 5.4 miles west of the City of Lincoln, Placer County, California. The Proposed Action is a cooperative effort between the AFSP (co-managed by Reclamation and U.S. Fish and Wildlife Service [USFWS]), California Department of Fish and Wildlife (CDFW), Family Water Alliance (FWA) and SSWD. The Proposed Action consists of the installation of two cone fish screens at the entrance of the existing Pleasant Grove Canal to improve fish passage in Auburn Ravine (Figure 1). Installation of the fish screens would help to prevent listed and other migratory or resident fish species in Auburn Ravine from becoming entrained or otherwise impacted by the continued use of the pumps, such as being drawn into the District's irrigation system.

SSWD operates a flashboard dam and gravity diversion on Auburn Ravine for groundwater replenishment and agricultural purposes. The canal diverts up to 80 cfs from the impounded water that is typically about three to four feet deep at the canal entrance. There is no structure at the head of the canal and all water flow and elevations are controlled at both the flashboard structure on Auburn Ravine and a canal check structure about 1,500 feet downstream of the canal. The flashboard dam is generally installed in April of each year and removed by mid-October to coincide with the irrigation season; however, the flashboard dam is not being installed this year. The dam installation and regulation is necessary for the canal to operate.

During the winter months when the dam is removed, the canal invert is generally above the river surface elevation, except during high flow or flood events. The top of the canal banks are located below the high flow or flood water elevations so access to the site in the winter is not always possible. During the irrigation season, flows and water depths in Auburn Ravine are generally regulated so the canal surface elevation is relatively constant.

### 1.1 Purpose of the Biological Assessment

This Biological Assessment's (BA) purpose is to assess the effects of the Proposed Action upon threatened, endangered, proposed, or sensitive species listed below, as well as, effects to designated critical habitat and Essential Fish Habitat (EFH). Those species that occur and have habitat within the Proposed Action areas under NOAA National Marine Fisheries Service (NMFS) jurisdiction and therefore could be affected are analyzed in this report.



SOURCE: "Pleasant Grove, CA" USGS 7.5 Minute Topographic Quadrangle, T12N R5E, Section 26, Mt. Diablo Baseline & Meridian; AES, 2012

Family Water Alliance South Sutter Initial Study / 212503 ■

**Figure 1**  
Site and Vicinity

This BA has been prepared in accordance with legal requirements set forth under Section 7 of the Federal Endangered Species Act (ESA) (16 U.S.C. 1536 (c)), Section 305 (b)(2) of the Magnuson - Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and follows the guidance standards Reclamation established under the National Environmental Policy Act and ESA.

## **1.2 Species Considered**

The following threatened (T) and endangered (E) species that could potentially be impacted by the Proposed Action include:

- Central Valley spring-run Chinook Salmon (*Oncorhynchus tshawytscha*) **T**
- Sacramento River winter-run Chinook Salmon (*Oncorhynchus tshawytscha*) **E**
- California Central Valley Steelhead (*Oncorhynchus mykiss*) **T**

## **1.3 Critical Habitat**

Critical habitat designations identify those physical and biological features of the habitat that are essential to the conservation of the species and that may require special management consideration or protection. Within the Sacramento River, critical habitat includes the river water, river bottom, and the adjacent riparian zone used by salmonid and sturgeon fry and juveniles for rearing. The reach of Auburn Ravine that contains the Proposed Action area is designated critical habitat for California Central Valley steelhead. Critical habitat in the Proposed Action area includes “freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels and undercut banks supporting juvenile and adult mobility and survival” (70 Federal Register (FR) 52488, 2005).

Critical habitat for California Central Valley steelhead was designated on September 2, 2005 (70 FR 52488). Critical habitat includes stream channels within certain occupied stream reaches and includes a lateral extent as defined by the ordinary high water mark (OHWM, 33 CFR 329.11) or the bank full elevation. Designated critical habitat for California Central Valley steelhead includes Auburn Ravine.

#### **1.4 Essential Fish Habitat**

In Section 305 (b)1(2) of the amended Magnuson-Stevens Act, Congress directs federal agencies to consult with the Secretary of the Interior (Secretary) with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH identified under the Magnuson-Stevens Act. Therefore, Central Valley Chinook salmon EFH is assessed in this document. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. 1802(10)). EFH, specifically juvenile and adult migration corridors, is found within the Proposed Action area.

#### **1.5 Authorities and Scope of Discretion**

Reclamation is the federal lead agency for the Proposed Action. Reclamation's involvement is limited to contributing up to fifty percent of the Proposed Action's intake/fish screen cost. This funding will be provided by Reclamation under CVPIA Section 3406(b)(21), which authorizes the Department of the Interior to develop and implement measures to avoid losses of juvenile anadromous fish resulting from unscreened diversions on the Sacramento and San Joaquin Rivers and their tributaries.

Operation of the District's diversion is beyond the discretion of Reclamation, therefore there is no direct Federal nexus to address the effects associated with their water use. Water use and operation of the pumping facilities that are appurtenant to the fish screen are inextricably related to the Proposed Action's purpose; subsequent effects analysis of the effects of the Proposed Action is not limited to the effects over which Reclamation has discretion or not; it considers all of the effects associated with intake/fish screen construction, operations, and maintenance. However, take coverage for listed anadromous fish affected by the Proposed Action will only be given for those activities that Reclamation has discretion over, namely the Proposed Action's construction.

## **Chapter 2 Proposed Action**

### **2.1 Proposed Action Area**

The Proposed Action area for the project includes all areas affected directly or indirectly by project construction and operation, including areas outside the immediate construction area. With in-river construction projects, the Proposed Action area is defined downstream by any area that may be affected by elevated turbidity or sediment deposition.

## 2.2 Description of Proposed Action

Intake Screens, Inc. (ISI) will design and install the new intake structure's two self-cleaning conical fish screens, bases, culverts, sheetpile wall, and controls. The new intake structure will protect the currently unscreened diversion with a state-of-the-art fish protection screen.

An underground trench will be dug along Pleasant Grove Canal's existing access road from the PG&E meter and termination point on the access road area to the new intake structure. The trench will be approximately 40 inches deep, 2 feet wide and 400 feet long and include at least one pull box along the alignment between the two locations. Once the power line is installed, the trench will be filled with native soils and returned to pre-existing conditions. SSWD's power line will terminate at the intake structure's control pad area.

ISI's staging area will be on the existing access road and is expected to be less than 100 feet by 100 feet. No materials are expected to be stored on-site except during the fish screen installation period.

Two, 14-foot diameter, cone-shaped fish screens with self-cleaning brush cleaners will be placed at the existing intake canal entrance at Auburn Ravine. Each screen will be placed on a 15-foot by 15-foot pile-supported steel base and connected to a four-foot diameter culvert pipe to convey the screened water into the canal. A sheetpile headwall driven across the canal entrance will separate the canal from the Auburn Ravine. The two culvert pipes from the screens will pass through this sheetpile wall and discharge as shown on the plans (Appendix A). The screened pipes will discharge into a common outfall area behind the sheetpile wall to dissipate the pipe velocity before flowing into the unlined canal ditch.

A minimum screen area of 240 square feet must be provided to meet the fish screen velocity criteria of 0.33 feet per second. The two cones will provide about 280 square feet of screen surface when they are located in 2.5 feet of water. If the screen is fully submerged, or in at least 4 feet of water depth, there will be about 360 square feet of surface area available. The base of the screen will be placed just above the current sandy river bottom elevation which is about the current intake channel invert elevation. The large surface area is necessary to reduce headlosses so the canal can achieve its full gravity diversion capability when necessary.

The existing canal entrance will be widened slightly to place the screens. The river and canal bank slopes will be excavated down to the existing river bed elevation. Additional excavations will also be necessary to place the screen bases and pipes. Excavation will occur when Auburn Ravine flows are minimal. A cofferdam would not be required to perform the work since the canal invert is generally higher than the Auburn Ravine riverbed elevation.

A silt curtain, or temporary barrier, will be placed at the canal entrance to isolate the canal from the main river during the culvert and fish screen installation to prevent turbidity or water quality issues in Auburn Ravine. This barrier will not be designed to prevent seepage or to dewater the canal as the culverts will likely be dug in the wet.

The screen's pile supported bases will be supported by five, eight-inch diameter piles. Each pile will be driven about 15 feet or to refusal. The base will be clamped and bolted to these piles at the proper elevation. The sheetpile headwall will also be driven into the canal bottom about twice as deep as it is tall. A walkway may be provided on top of the sheetpiles for better access to the screen area.

When the screens are installed and operational, screen access will be via the existing embankment road along the intake canal. The screens will be designed to be in-place year round; however, a crane or long reach excavator can be used to remove the screens if desired or if necessary.

The screen's brush cleaning system is operated by a hydraulic power system. A hydraulic power unit will be placed in an outdoor cabinet near the intake site and located above the flood elevation. Hydraulic hoses will be laid in conduits to each screen unit.

PG&E will supply power to the new intake structure. Power lines will be installed along the existing access road that runs through the property to the south of the new intake structure. Nine fiberglass poles will be installed along the road, sited to avoid impacting vernal pools in the area. From the northernmost power pole where the PG&E meter and termination point is located, a power line will be trenched along the Pleasant Grove Canal's existing access road to the new intake structure.

### **2.3 Project Components**

The fish screen system will be installed after the normal fall irrigation season and when flows are expected to be lowest in the ravine (between October and December). The diversion normally operates from April through September annually. The initial work will consist of placing a silt barrier and excavating the banks and canal bottom. The sheetpile headwall and culverts will be placed first, followed by the screen bases, pilings, and finally the screen units.

The proposed sequence of work is as follows:

1. Mobilize crane, excavator, and current installation materials on-site;
2. Install silt barrier along the river channel;
3. Excavate, install, and backfill electrical conduits along the access road to the project site;
4. Excavate the river channel and canal sections for the culverts, screen bases, and intake headwall as necessary;
5. Install main culverts and backfill;
6. Drive sheetpile headwall (with culvert opening);
7. Fish screen base installation;
8. Pile driving for screen bases;
9. Install control panel slab;
10. Place screen units on base;
11. Place hydraulic lines between the screen and control panel;
12. Install control panel and hydraulic system;
13. Connect to electrical and test system

ISI's intake screen system will be fabricated and installed to meet federal and State fish screen criteria at full diversion capacity at the lowest expected water levels. The fish screen system will also be designed to minimize headloss at the intake. This will be accomplished by reducing screen slot velocities, providing a larger diameter screen to decrease screen slot velocities, and enlarging the intake piping as much as possible.

The fish screen project is scheduled for installation from September 1, 2014 to December 31, 2014. In-water activities are scheduled between September 1, 2014 and November 30, 2014, when Auburn Ravine flows are minimal and expected to be less than a foot deep. The majority of the site work is expected to occur after the diversion dam is removed on or about October 15. The work is expected to take about three weeks following the initiation of work.

## **Chapter 3      Environmental Baseline**

The existing pumps operate under both high and low water conditions from about mid-April through mid-October, but can deliver some water during the winter months. The existing pumps are well supported; however, the existing support structure collects debris during high flow events and requires annual maintenance by divers and boats. The existing pump platform deck and its supports would be modified for the screen system; however, the overall footprint of the facility would remain unchanged.

### **3.1 Potentially Affected Listed Species and Associated Critical Habitats**

#### **3.1.1 Central Valley Spring-Run Chinook Salmon**

The Central Valley spring-run Chinook salmon is listed as threatened under the federal ESA (64 FR 50393–50415, September 16, 1999). Critical habitat was designated for this species on September 2, 2005 (70 FR 52488), but does not include Auburn Ravine.

##### **3.1.1.1 Distribution**

The Central Valley spring-run Chinook salmon was historically the second most abundant run of Central Valley Chinook salmon (Moyle *et al.* 2002). It occupied the headwaters of all major river systems in the Central Valley where there were no natural barriers. Central Valley spring-run Chinook salmon, like steelhead, migrated farther into headwater streams where cool, well-oxygenated water was available year round.

Gold mining and agricultural diversions caused the first major declines in Central Valley spring-run Chinook salmon populations (Moyle *et al.* 2002). Further extirpations followed construction of major water storage and flood control reservoirs on the Sacramento and San Joaquin rivers and their major tributaries in the 1940s and 1950s (Moyle *et al.* 2002). Central Valley spring-run Chinook salmon have been completely extirpated in the San Joaquin drainage. The only populations of Central Valley spring-run Chinook salmon are currently restricted to accessible reaches in the upper Sacramento River mainstem, Antelope Creek, Battle Creek, Beegum Creek, Big Chico Creek, Butte Creek, Clear Creek, Deer Creek, Feather River, Mill Creek, and the Yuba River (NMFS 2003). In the 1980s, these populations reached low abundance levels (e.g., five-year mean population sizes of 67 to 243 spawners), compared to historic peak abundance of 700,000 spawners (NMFS 2003).

##### **3.1.1.2 Life History and Habitat Requirements**

Historical records indicate that adult Central Valley spring-run Chinook salmon leave the ocean and enter the Sacramento River from March through September during the spring snow-melt run-off, continue to their spawning streams, and then hold in deep, cold pools until they spawn.

Spawning occurs in gravel beds in late August to October, with peak spawning in Mid-September. During spawning, the female digs a redd in which she deposits her eggs, which are then fertilized by the male. The optimal water temperature for egg incubation is 44.1–54.0°F (6.7–12.2°C) (Reclamation 2004). After emergence, fry remain in shallow, lower velocity edgewaters particularly where debris accumulates and makes the fry less visible to predators (CDFG 1998). Juvenile Central Valley spring-run Chinook salmon rear in their natal streams, the mainstem of the Sacramento River, and in the Delta.

Central Valley spring-run Chinook salmon appear to emigrate at two different life stages: as fry or as yearlings. Fry emigrate between February and June, and yearlings emigrate between October and March, peaking in November (Reclamation 2004). Juveniles that remain in their natal streams tend to emigrate as yearlings. Yearlings move with the onset of the stormy season, beginning in October of the year following spawning and continuing through March (CDFG 1998).

### **3.1.1.3 Habitat and Occurrence in the Proposed Action Area**

The portion of Auburn Ravine in the Proposed Action area is comprised of open water (Auburn Ravine), ruderal/developed, riparian woodland, agricultural ditch and vernal pool wetlands. The adjacent lands are predominately used for agriculture.

Central Valley spring-run Chinook salmon may be present within the Proposed Action area; however, lack of appropriate flows, temperature, cover habitat and spawning substrate prevents the area from being used for spawning or rearing habitat.

### **3.1.2 Sacramento River Winter-Run Chinook Salmon**

The Sacramento River winter-run Chinook salmon is listed as an endangered species under the federal ESA (59 FR 440-450, January 4, 1994). Critical habitat was designated for this species on June 16, 1993 (58 FR 33212), but does not include Auburn Ravine.

#### **3.1.2.1 Distribution**

The Sacramento River winter-run Chinook salmon historically occurred in the spring-fed headwaters of the Sacramento River and some of its tributaries upstream of the Red Bluff Diversion Dam (RBDD). Shasta Dam blocked access to the primary spawning habitat for Sacramento River winter-run Chinook salmon. Construction and operation of RBDD and warmer water temperatures downstream of Shasta Dam resulted in decline of Sacramento River winter-run Chinook salmon abundance from tens of thousands of adults in the early 1970s to a few hundred adults in the early 1990s. Recently, improved passage conditions at RBDD and cooler water temperatures downstream of Shasta Dam appear to have increased abundance of adult fish returning to spawn.

Sacramento River winter-run Chinook salmon currently spawn in the Sacramento River downstream of Keswick Dam. Juveniles have been observed in the Delta during October through December, especially during high Sacramento River discharge caused by fall and early winter storms. Sacramento River winter-run Chinook salmon smolts may migrate through the Bay-Delta to the ocean from December to as late as May (Stevens 1989).

### **3.1.2.2 Life History and Habitat Requirements**

Adult Sacramento River winter-run Chinook salmon enter the Sacramento River basin between December and July, peaking in March (NMFS 2006). Suitable temperatures for upstream migration range from 57 ° to 67 °F (14 ° to 19 °C) (NMFS 1997). Most Sacramento River winter-run Chinook salmon return to spawn as three-year-olds (Moyle 2002). Spawning occurs from late April to early August, with peak spawning occurring in May or June (Moyle 2002). Juvenile Sacramento River winter-run Chinook salmon reside in streams for approximately five to 10 months prior to emigration to the ocean (Moyle 2002). Emigration of juveniles past RBDD begins in mid-July and can continue through March of the following year in dry years (NMFS 1997).

### **3.1.2.3 Habitat and Occurrence in the Proposed Action Area**

The portion of Auburn Ravine in the Proposed Action area is comprised of open water (Auburn Ravine), ruderal/developed, riparian woodland, agricultural ditch and vernal pool wetlands. The adjacent lands are predominately used for agriculture.

Winter-run Chinook salmon may be present within the Proposed Action; however, lack of appropriate flows, temperature, cover habitat and spawning substrate prevents the area from being used for spawning or rearing habitat.

### **3.1.3 California Central Valley Steelhead**

The California Central Valley steelhead is listed as threatened under the ESA (63 FR 13347-13371, March 19, 1998). Critical habitat was designated for this species on September 2, 2005 (70 FR 52488) and includes Auburn Ravine.

#### **3.1.3.1 Distribution**

The California Central Valley steelhead historically inhabited large and small streams throughout the Sacramento–San Joaquin watershed. It is now restricted to the upper Sacramento River downstream of Keswick Reservoir; the lower reaches of large tributaries downstream of impassable dams; small, perennial tributaries of the Sacramento River mainstem and large tributaries; and the Delta.

Factors related to the decline of California Central Valley steelhead include loss of habitat in river reaches blocked by dams, degradation of habitat conditions (e.g., water temperature), and entrainment in water diversions. Loss of habitat has the greatest effect on steelhead abundance. Major dams are the primary barriers to steelhead access to Central Valley rivers and streams. Dams at low elevations on all major tributaries block access to an estimated 95% of historical spawning habitat in the Central Valley. Below dams, remnant steelhead populations are affected by varying flow conditions and high summer and fall water temperatures. Unscreened agricultural, municipal, and industrial diversions in the Delta and rivers cause entrainment losses of emigrating juvenile steelhead. More than 90% of the adult steelhead in the Central Valley are

produced in hatcheries (Reynolds et al. 1990, Reclamation 2004). Hatchery-produced fish may substantially affect the genetic integrity of wild populations. Adult and juvenile steelheads are harvested by sport anglers in the Central Valley watershed.

There is no commercial or sport fishery for steelhead in the ocean and, for unknown reasons, steelhead are rarely taken by commercial or sport salmon trollers (Reclamation 2004).

### **3.1.3.2 Life History and Habitat Requirements**

Because of mixed genetic stock from past hatchery releases and changes in flow timing and magnitude associated with water resources development projects, steelhead in the Sacramento River migrate upstream from July to March. Most adults migrate in September and October (Reclamation 2003). Spawning in the Sacramento River basin typically occurs from late December to April, with most spawning occurring in January through March. Unlike Chinook salmon, which die after spawning, steelhead can survive spawning and live to spawn more than once. Steelhead require relatively clean, cool (less than 57°F) water in which to spawn successfully. The eggs hatch anywhere from 19 to 80 days after spawning, depending on water temperature (warmer temperatures result in faster hatching times), and the young remain in the gravel for several weeks before emerging as fry (Reclamation 2003).

Juvenile steelhead rear a minimum of one and typically two or more years in fresh water before migrating to the ocean. Juvenile migration to the ocean generally occurs from December through August. The peak months of the juvenile migration are January to May (McEwan 2001, cited in Freeport Regional Water Project Draft EIR/EIS, July 2003). After two to three years of ocean residence, adult steelheads return to their natal stream to spawn as four- or five-year olds.

### **3.1.3.3 Habitat and Occurrence in the Proposed Action area**

The portion of Auburn Ravine in the Proposed Action area is comprised of open water (Auburn Ravine), ruderal/developed, riparian woodland, agricultural ditch and vernal pool wetlands. The adjacent lands are predominately used for agriculture.

California Central Valley steelhead may use the Proposed Action area as a migration corridor. Lack of appropriate flows, temperature, cover habitat and spawning substrate prevents the area from being used for spawning or rearing habitat.

## **Chapter 4        Effects of the Proposed Action**

All listed fish species described within this assessment that have the potential to be in the Proposed Action area have similar life histories as well as biological and habitat requirements. The main difference is the time of year when each of these species, as juveniles or adults, will migrate to and from the ocean. Although the timing of migration is different, these listed fish species may be present within Auburn Ravine, including the Proposed Action area. According to federal and state biologists familiar with this area, Auburn Ravine is not known to support spawning for salmon or steelhead (Healy & Campbell, pers. comm. 2014).

The potential environmental consequences resulting from the Proposed Action's construction, operations, and maintenance are expected to be similar for Central Valley spring-run and Sacramento River winter-run Chinook salmon, and California Central Valley steelhead. Critical habitat for and EFH overlap in the Proposed Action area and therefore effects analysis for critical habitat and EFH will be discussed collectively below.

### **4.1     Direct Effects Analysis for Salmonids**

Direct effects associated with in-water construction work would involve equipment and activities that would produce pressure waves, and create underwater noise and vibration, thereby temporarily altering in-water conditions. The Proposed Action would involve the installation of piles to be constructed in-water at the screen location. In-water work would consist of the installation of the piles and supports that would be necessary for the installation of the fish screen components. The screen's bases will be supported by five, eight-inch diameter piles. Each pile will be driven about 15 feet or to refusal and typically one to two piles can be driven per hour. Based on the type of piles to be used for installation, shallow site conditions and usage of a vibratory hammer, the peak and accumulated sound pressures are anticipated to be 192 dB (peak) and 177 dB (accumulated). These levels are below NMFS approved criteria for injury to fish from pile driving activities (206 dB peak and 187 dB accumulated for fish greater than 2 grams) (see Appendix B for further detail regarding noise impacts resulting from pile driving).

Construction activities will produce both pulsed (i.e., impact pile driving) and continuous (i.e., vibratory pile driving) sounds. Fish react to sounds which are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005, 2009) identified several studies that suggest fish may relocate to avoid certain areas of noise energy (Caltrans 2009). Additional studies have documented effects of pile driving (or other types of continuous sounds) on fish, although several are based on studies in support of large, multi-year bridge

construction projects (Scholik and Yan 2001, 2002; Govoni et al. 2003; Hawkins 2005; Hastings 1990, 2007; Popper et al. 2006; Popper and Hastings 2009 – referenced in Caltrans 2009). Sound pulses (SPL) at received levels of 160 dB may cause subtle changes in fish behavior while SPLs of 180 dB may cause noticeable changes in behavior (Chapman and Hawkins 1969; Pearson et al. 1992; Skalski et al. 1992 – referenced in Caltrans 2009). SPLs of sufficient strength have been known to cause injury to fish and fish mortality (CALTRANS 2001; Longmuir and Lively 2001 – referenced in Caltrans 2009). The most likely impact to fish from pile driving activities at the Proposed Action areas would be temporary behavioral avoidance of the areas. The duration of fish avoidance of these areas after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

In addition, the areas likely impacted by the pile driving associated with fish screen installations are relatively small. Avoidance by potential prey (i.e., fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of these areas after pile driving ends is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

To further reduce potential impacts to fish, construction will incorporate a soft start. The use of a soft-start procedure is believed to provide additional protection to fish species by warning, or providing fish species a chance to leave the area prior to the hammer operating at full capacity. The pile driving engineer will utilize soft-start techniques (ramp-up and dry fire) recommended by NMFS for impact and vibratory pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for fifteen seconds at reduced energy followed by a one minute waiting period. This procedure will be repeated two additional times. In addition, pile driving will only be conducted between two hours post-sunrise through two hours prior to sunset (civil twilight), between the periods of September 1 and October 31. Should fish species be detected during pile driving, all pile driving activities will be ceased until fish exit the Proposed Action area.

Underwater installation activities could temporarily create minor sediment plumes by releasing gill occluding sediments which could directly affect salmonids. The turbidity plume resulting from site preparation is not expected to extend across the entire waterway and salmonids would be able to effectively avoid the plume and their upstream or downstream migration would not be blocked. The period of increased turbidity would be limited to the period of installation of the intake structure (in-water activities for the project are scheduled between September 1 and October 31). The potential effects of construction activities on water quality is expected to be intermittent and temporary, return rapidly to baseline conditions, and be localized within the channel (approximately 100 feet wide and 100 feet or less downstream of the site). No long term turbidity-related effects are expected.

All listed salmonid species are known to occur in the Proposed Action area during their respective periods of juvenile and adult migration to and from the ocean. However, an analysis of the different migration periods and survey data shows that salmonids are unlikely to be using the area when construction would occur during the proposed time period. It is important to note that there is a lack of significant cover or other important habitat features in the immediate Proposed Action area that could attract juvenile salmonids and other fishes and increase the likelihood of impacts. If salmonid species do enter the Proposed Action area, they would likely exhibit avoidance behavior in response to construction and associated activities and actively move away from the area.

#### **4.2 Indirect Effects on Salmonids**

There would be no indirect adverse effects to salmonids resulting from the installation of the fish screen. Placement of the fish screen would provide a long-term beneficial effect to the species and associated critical habitat as it creates a safer passageway. The possibility of fish entrainment at the site would be substantially, if not entirely, reduced by the Proposed Action.

#### **4.3 Interrelated and Interdependent Effects on Salmonids**

There are no interrelated or interdependent actions associated with the Proposed Action.

#### **4.4 Effects on Listed Species Critical Habitat and Salmonid Species EFH**

Construction activities would result in temporary minimal increases in turbidity, but the sediments are not expected to have a prolonged or substantial effect on critical habitat or EFH. The proposed construction would not significantly change the area relative to the level of disturbance that currently exists. The Proposed Action would in fact provide a long-term beneficial effect to listed fish species and their associated critical and essential fish habitat as it creates a safer passageway. The possibility of fish entrainment at the site would be substantially, if not entirely, reduced by the Proposed Action.

#### **4.5 Determination of Effects**

##### **4.5.1 Central Valley Spring-Run & Sacramento River Winter-Run Chinook Salmon**

The Proposed Action may affect, but is not likely to adversely affect Central Valley spring-run and Sacramento River winter-run Chinook salmon. Any disturbance to Chinook salmon would be temporary and localized and would be discountable. These determinations were made based on the limited scope of the Proposed Action, the concise installation period and survey data indicating that the species would not be present during project implementation.

Placement of the fish screen would provide a long-term beneficial effect to the species as it creates a safer passageway for migrating Chinook salmon. The possibility of fish entrainment at the site would be substantially, if not entirely, reduced by the Proposed Action.

#### **4.5.2 California Central Valley Steelhead and Critical Habitat**

The Proposed Action may affect, but is not likely to adversely affect California Central Valley steelhead. In addition, the Proposed Action is not likely to adversely modify critical habitat for the species. Disturbance to Central Valley steelhead and their critical habitat would be temporary and localized and would be discountable. These determinations were made based upon the limited scope of the Proposed Action, the concise period of its installation, and survey data indicating that the species would not be present during construction.

Placement of the fish screen would provide a long-term beneficial effect to the species and their associated critical habitat as it creates a safer passageway for migrating California Central Valley steelhead. The possibility of fish entrainment at the site would be substantially, if not entirely, reduced by the Proposed Action.

#### **4.5.3 Central Valley/Sacramento River Chinook Salmonids EFH**

The Proposed Action would have no effect on EFH for Central Valley/Sacramento River salmonids. Any disturbance to EFH would be temporary and localized and would be insignificant. These determinations were made based on the limited scope of project and the concise installation period.

Placement of the fish screen would provide a long-term beneficial effect to salmonid EFH as it creates a safer passageway for migrating Central Valley/Sacramento River Chinook salmon species. The possibility of fish entrainment at the site would be substantially, if not entirely, reduced by the Proposed Action.

## **Chapter 5      References**

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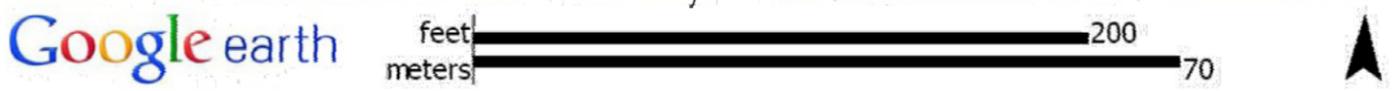
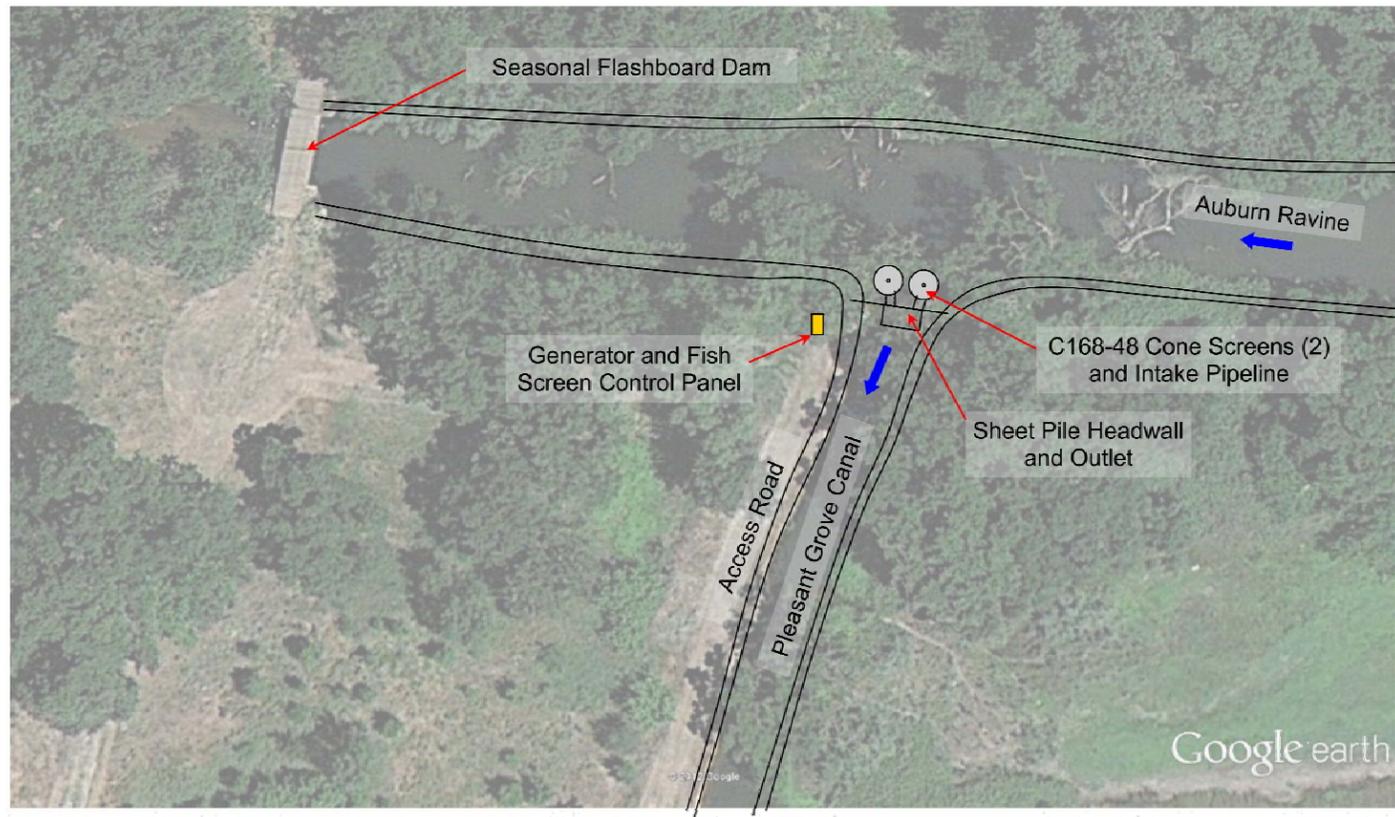
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## **APPENDICES**

**APPENDIX A  
CONSTRUCTION DRAWINGS**



Area Map

ALL DIMENSIONS IN INCHES UNLESS NOTED

| REV # | DESCRIPTION | DATE | INITIAL |
|-------|-------------|------|---------|
|       |             |      |         |
|       |             |      |         |

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STANDARD TOLERANCES  
 Fractional Dimensions ± 1/32  
 Decimal Dimensions ± .005

www.intakescreensinc.com

CA C.L. 796197

**ISI** Intake Screens, Inc.

8417 River Road - Sacramento, California 95832  
 (916) 665-2727 (916) 665-2729 FAX

DATE 10/29/12

APP'D BY DARRYL HAYES

DRAWN BY JACOB CHAPIN

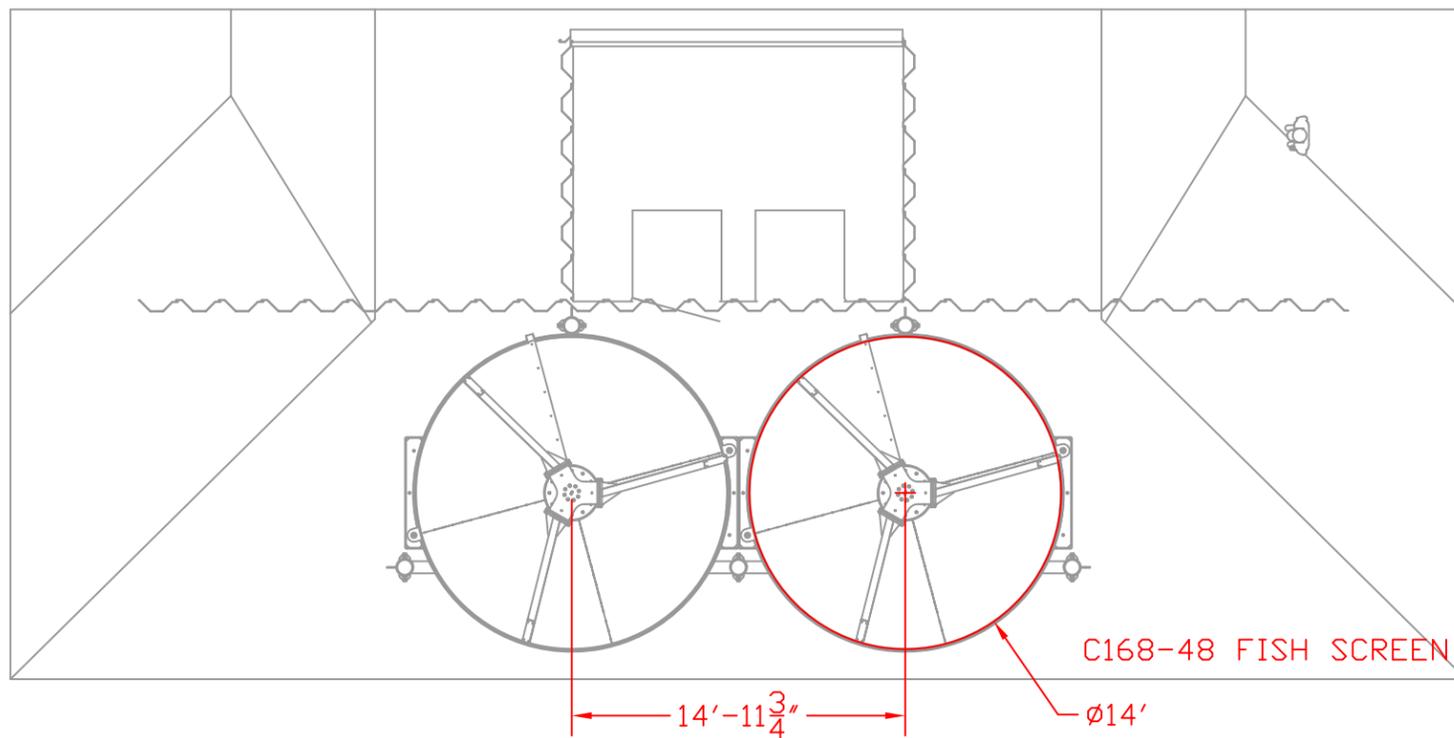
"B" SHEET SCALE NTS

PROJECT: SOUTH SUTTER

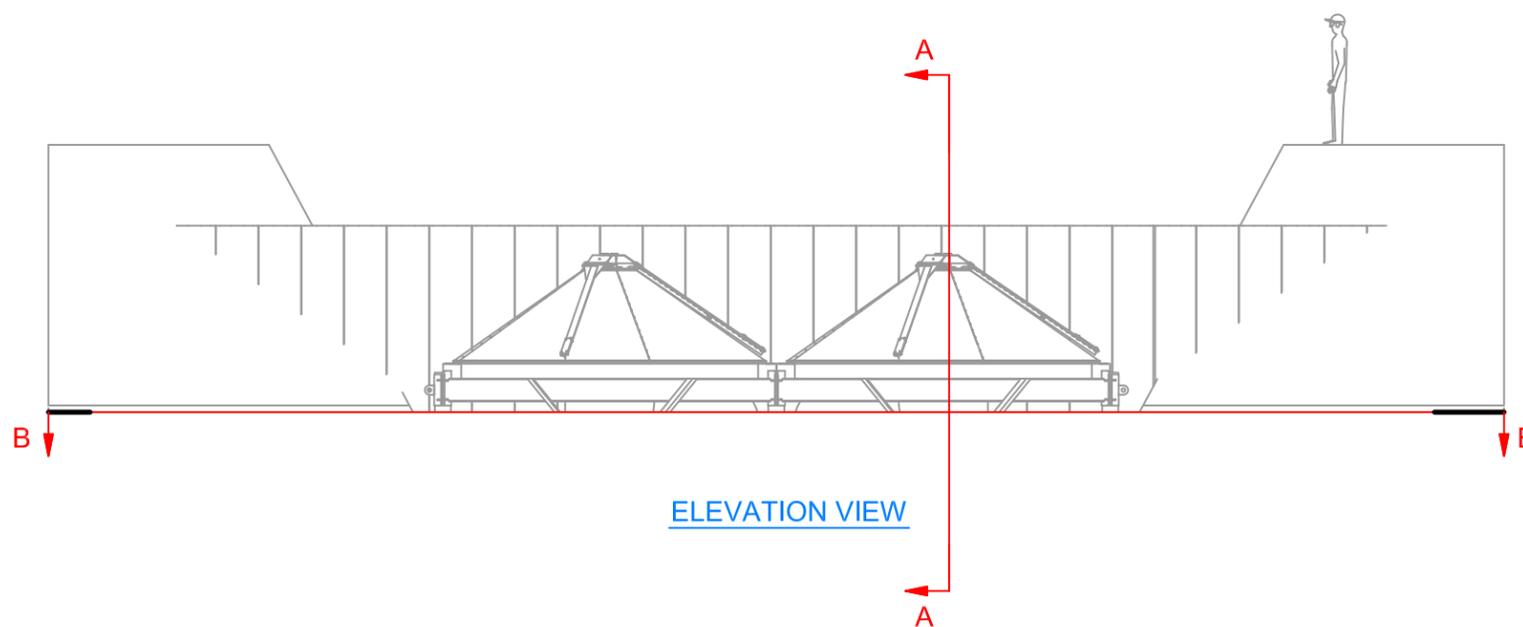
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DRAWING NUMBER: SOUTH SUTTER

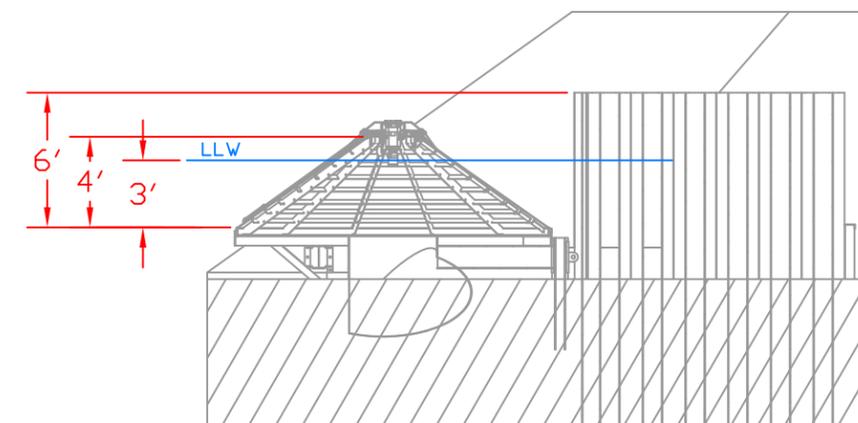
SHEET NUMBER 1



PLAN VIEW



ELEVATION VIEW



SECTION A-A

NOTES:

- 1) LLW is the minimum water surface elevation when the diversion dam is installed. Minimum water elevation when the dam is removed is at or below the screen base elevation.
- 2) The proposed site is located in a flood plain. In a flood, the structure may be completely submerged. The controls will be located above the flood elevation.
- 3) Each screen to be automatically cleaned by a electrical powered hydraulic power unit located on the adjacent bank area..
- 4) The entire structure to be sited within District right-of-way.
- 5) No dewatering is necessary for construction since the diversion dam will not be installed. A silt fence will be installed to prevent silt from entering the ravine.

ALL DIMENSIONS IN INCHES UNLESS NOTED

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DATE 4/5/12  
 APP'D BY DARRYL HAYES  
 DRAWN BY JACOB CHAPIN  
 "B" SHEET SCALE 1:100

PROJECT: SOUTH SUTTER

DESCRIPTION: LAYOUT

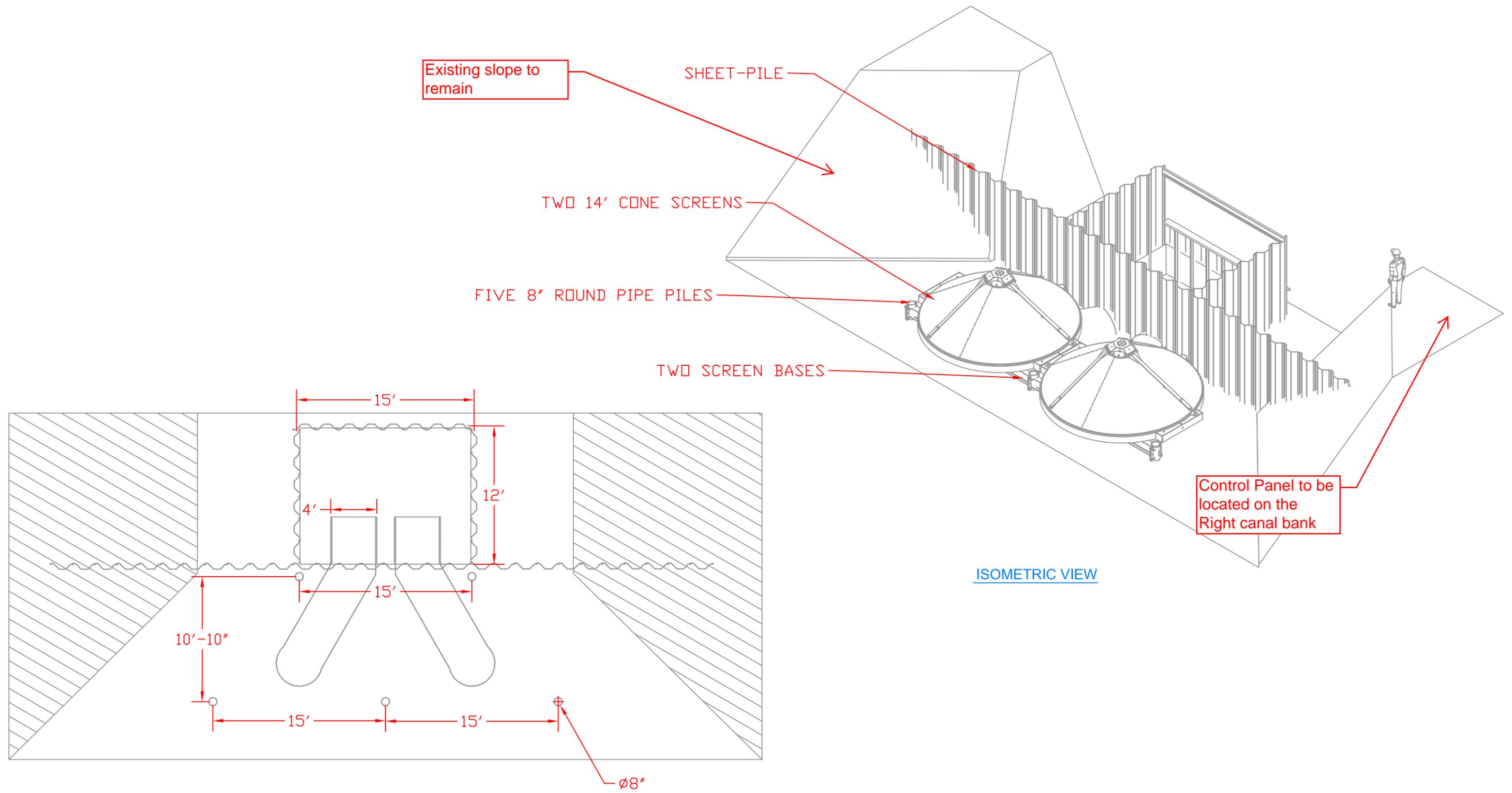
DRAWING NUMBER: SOUTH SUTTER

SHEET NUMBER

2

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STANDARD TOLERANCES  
 Fractional Dimensions ± 1/32  
 Decimal Dimensions ± .005



Existing slope to remain

SHEET-PILE

TWO 14' CONE SCREENS

FIVE 8" ROUND PIPE PILES

TWO SCREEN BASES

Control Panel to be located on the Right canal bank

ISOMETRIC VIEW

CULVERT PLAN AND SECTION B-B

Ø8"

ALL DIMENSIONS IN INCHES UNLESS NOTED

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DATE 4/5/12  
 APP'D BY DARRYL HAYES  
 DRAWN BY JACOB CHAPIN  
 "B" SHEET SCALE 1:100

PROJECT: SOUTH SUTTER

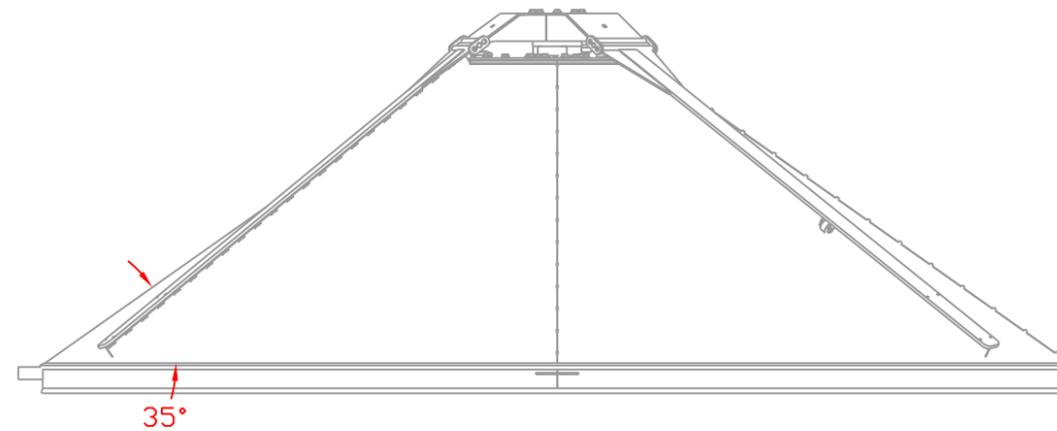
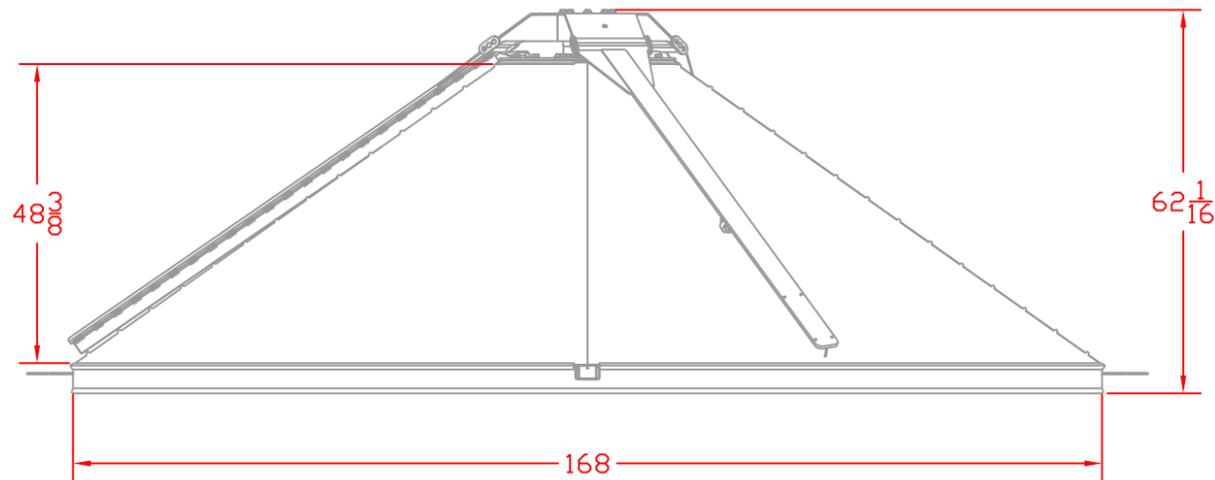
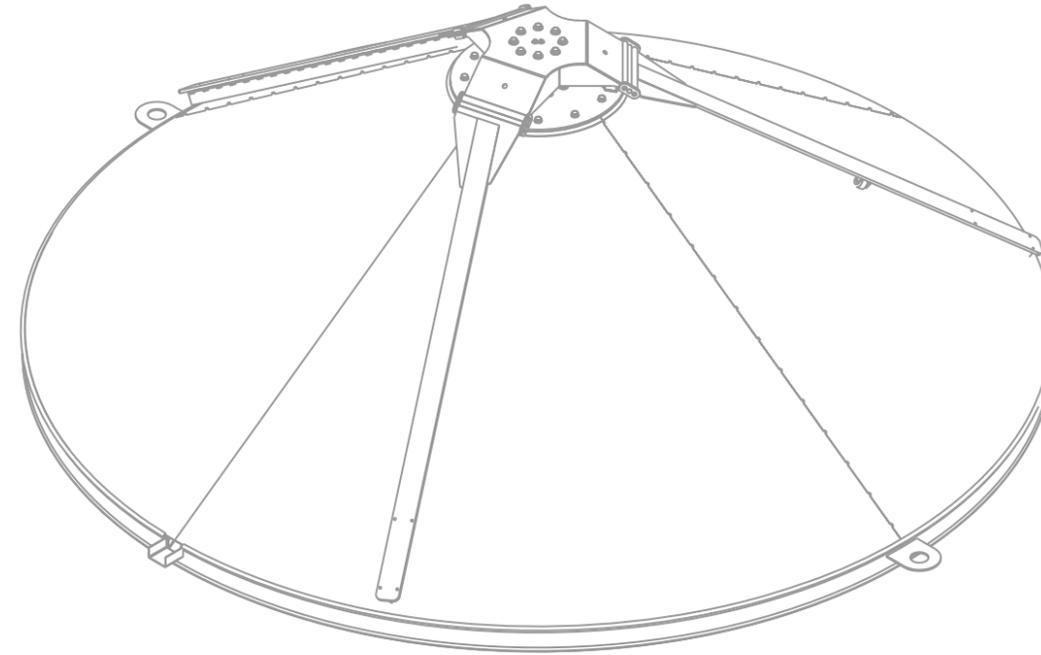
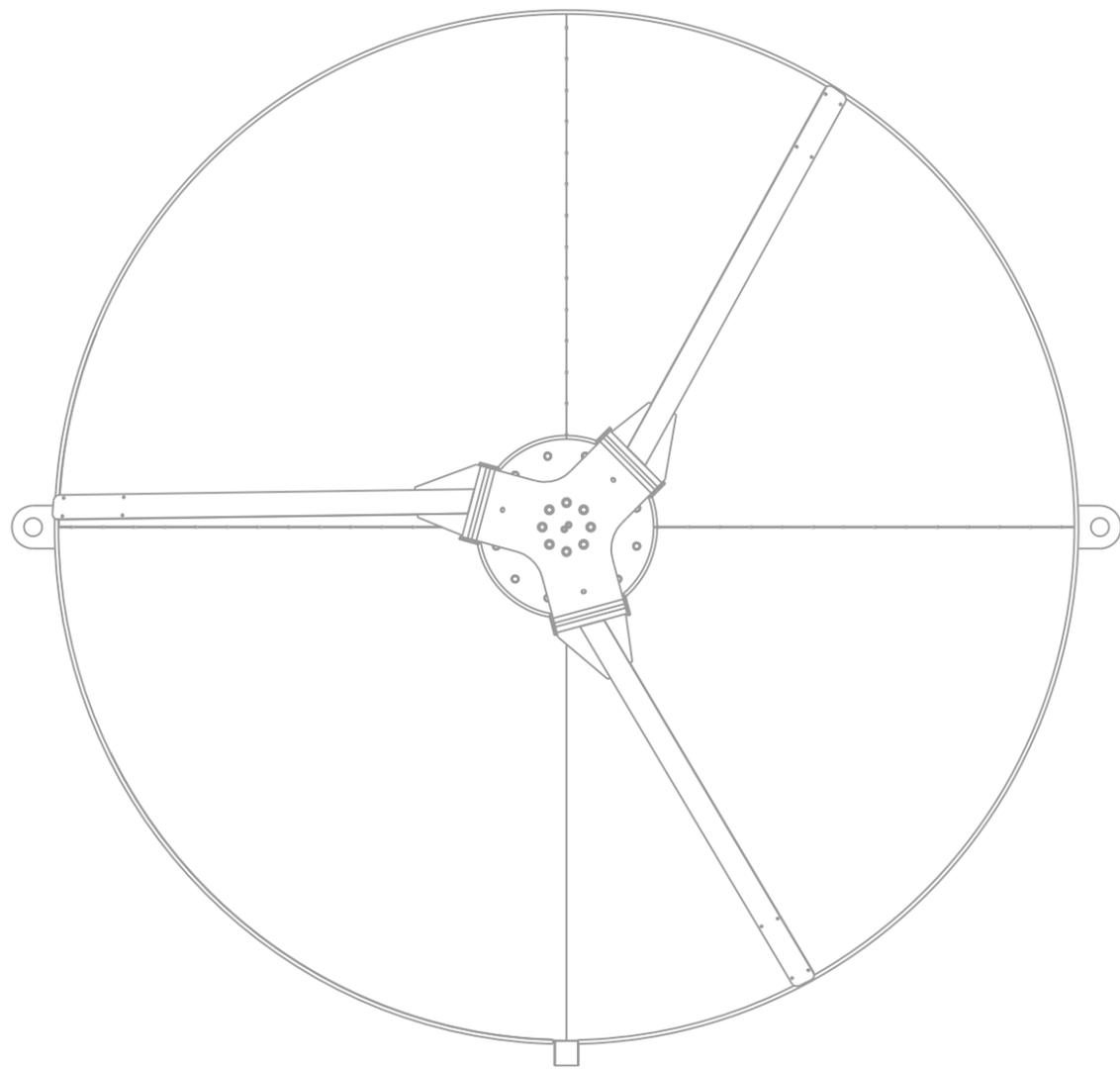
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DRAWING NUMBER: SOUTH SUTTER

SHEET NUMBER

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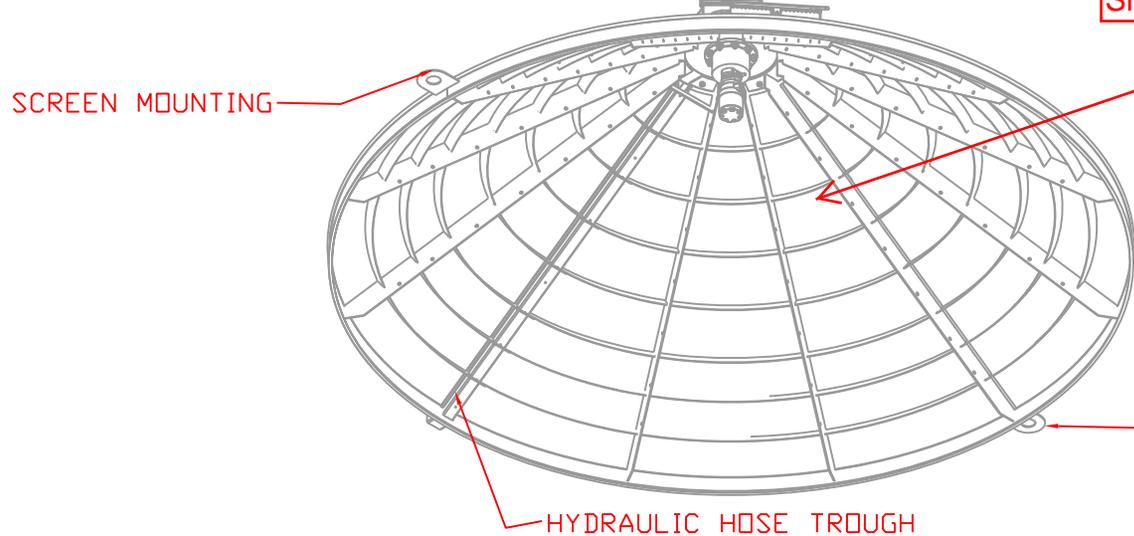
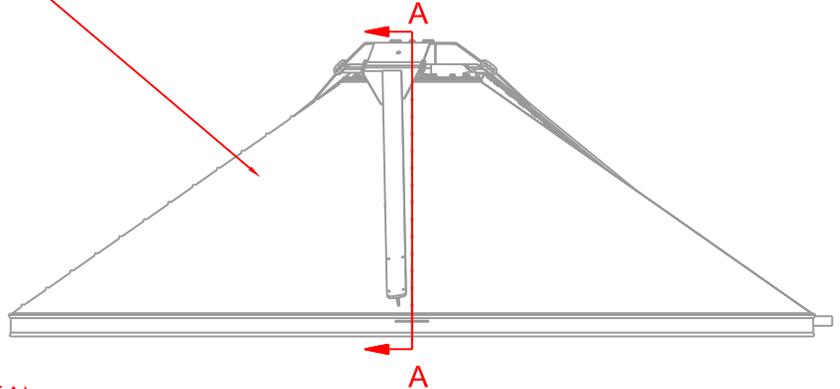
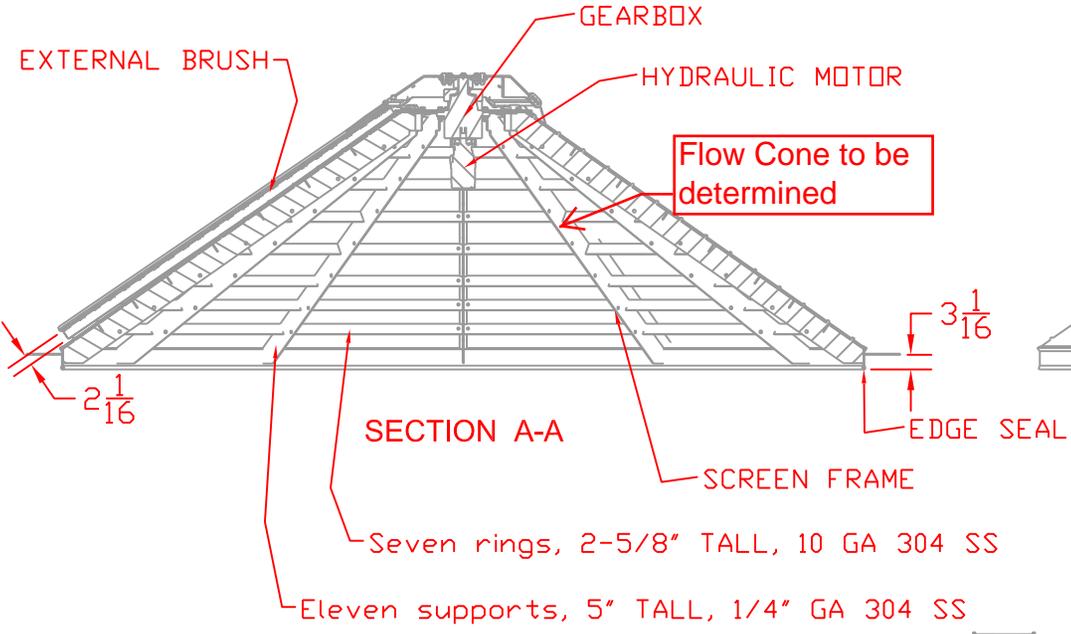
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 STANDARD TOLERANCES  
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|---|-------------|--|---------|
| REVISION #  | DESCRIPTION | DATE   | INITIAL |
| ...   | ...         | ...  | ...     |
|   |             |  |         |
|   |             |  |         |

|   |  |
|---|--|
| DATE<br>3/25/09   | <br>www.intakescreensinc.com<br>8417 River Road - Sacramento, California 95832<br>(916) 665-2727 (916) 665-2729 FAX |
| APP'D BY<br>RUSSELL BERRY IV                              |  |
| DRAWN BY<br>CHAPIN  | MODEL No.<br><b>C168-48</b>  |
| "A" SHEET SCALE<br>1:32                                   | DRAWING NUMBER:<br>ISI-14FT-D  |
| DESCRIPTION<br><b>C168-48 South Sutter Water District</b> |  |

WEDGE-WIRE SCREEN SURFACE, 180 SQ FT  
 HENDRICK 69V WIRE, 50% OPEN AREA, 304 SS  
 0.068" QIEW, 0.068 SLOT  
 L130Q SUPPORTS, 1" CENTER, 0.118 WIDE, 0.197" HIGH



Flow Distribution  
 Cone is NOT  
 Shown

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| REVISION # | DESCRIPTION | DATE | INITIAL |
|------------|-------------|------|---------|
| ...        | ...         | ...  | ...     |
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|                                    |  |
|------------------------------------|--|
| DATE<br>3/25/09                    | <br><small>8417 River Road - Sacramento, California 95832<br/>       (916) 665-2727 (916) 665-2729 FAX</small> |
| APP'D BY<br>RUSSELL BERRY IV       |  |
| DRAWN BY<br>CHAPIN                 | MODEL No.<br><b>C168-48</b>  |
| "A" SHEET SCALE<br>1:32            | DRAWING NUMBER:<br>ISI-14FT-D  |
| DESCRIPTION<br><b>C168-48 SSWD</b> |  |



PGE Meter location and new pole location. Start District supplied conduit and wire from this location

Control Cabinet and power disconnect

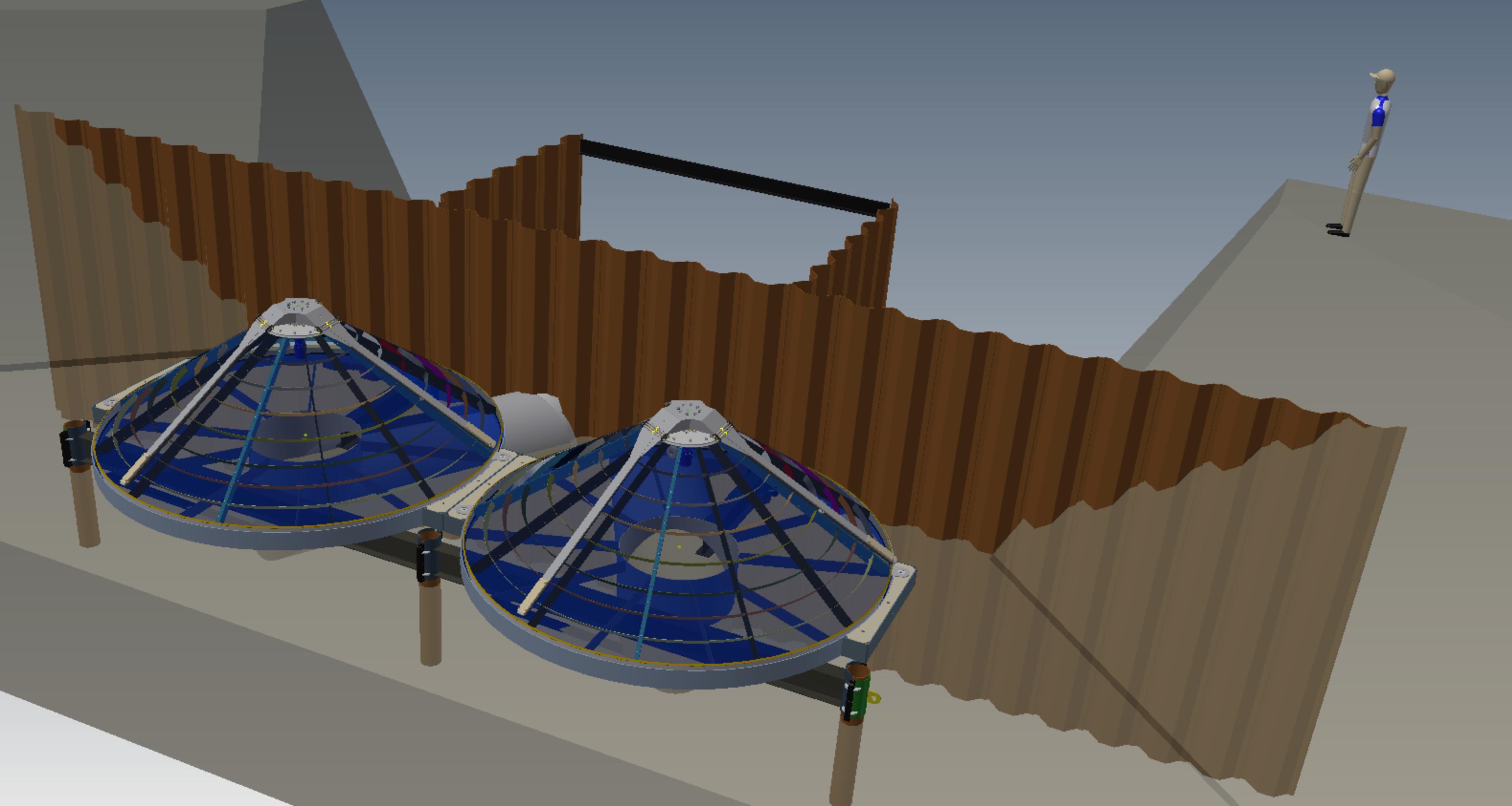
Total length of conduit is 400 feet long

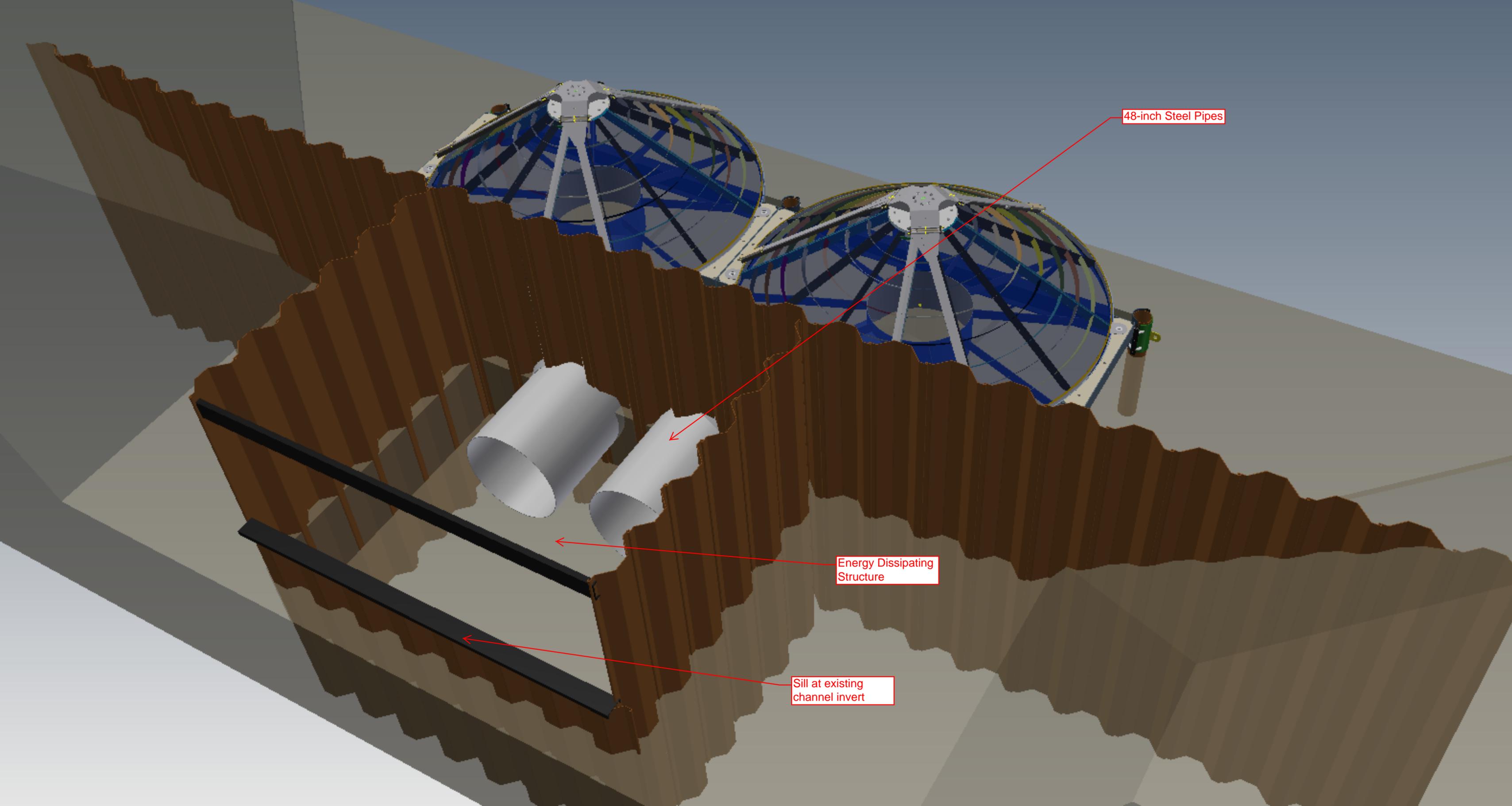
Pullbox - locate along access road

PGE Supplied underground power line (208 VAC 1 Phase)

© 2014 Google

Google earth

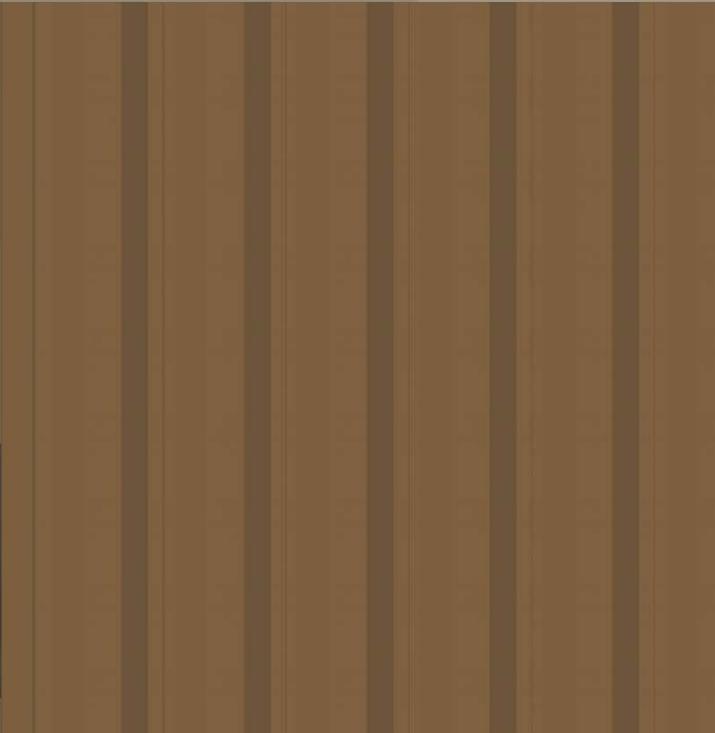
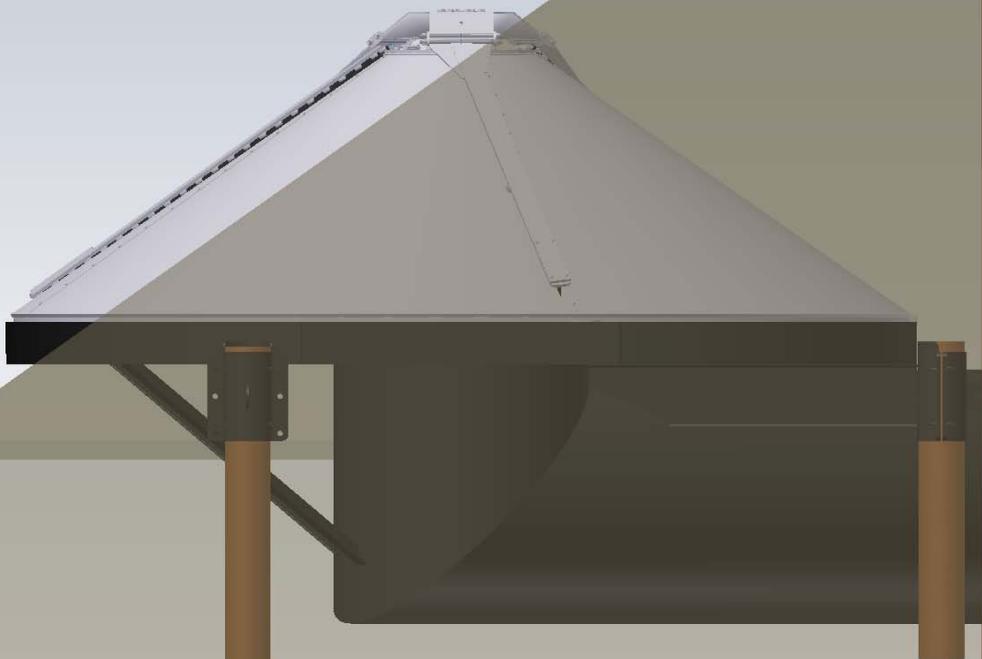


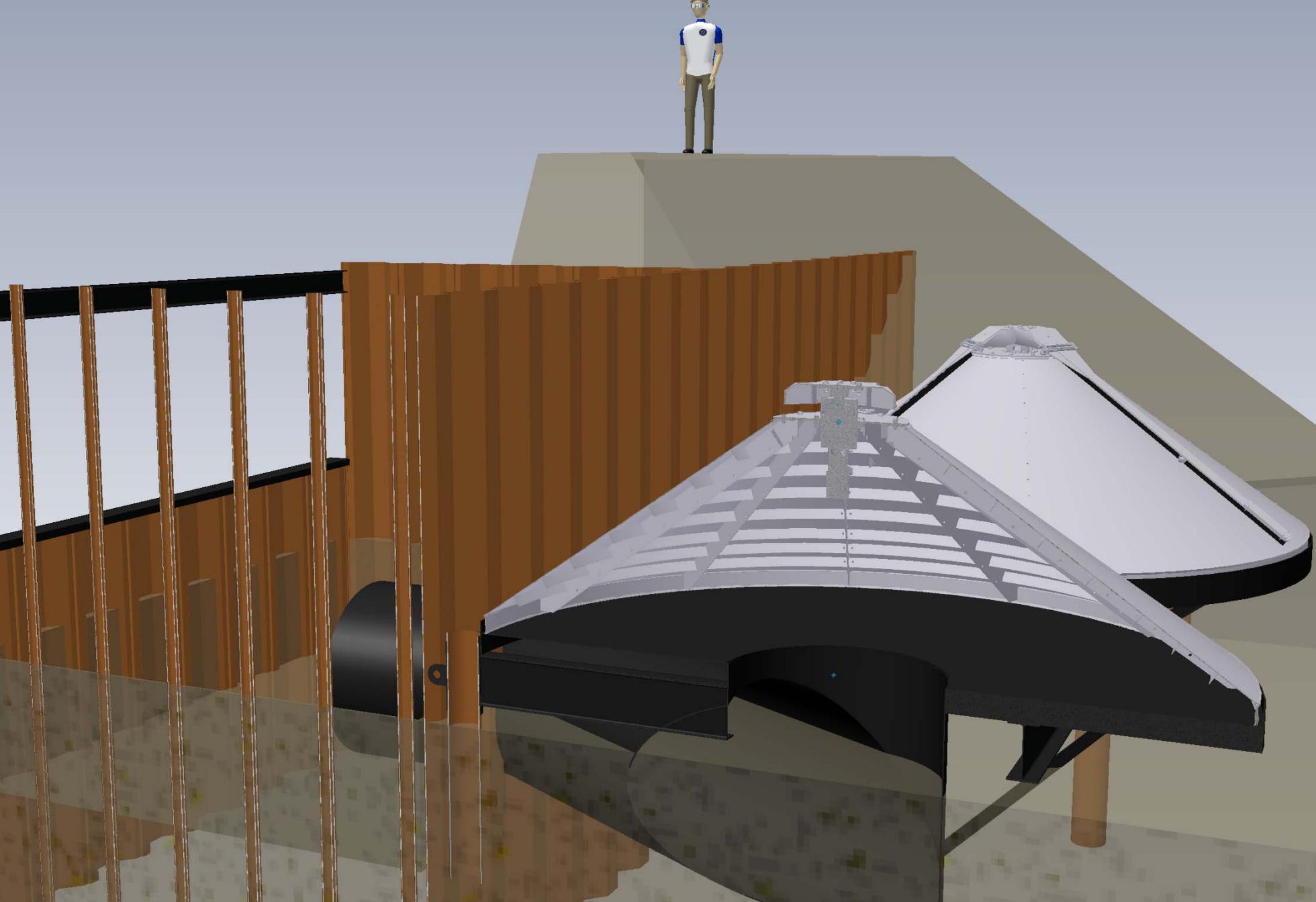


48-inch Steel Pipes

Energy Dissipating Structure

Sill at existing channel invert





**APPENDIX B  
NOISE ANALYSIS**

**Intake Screens, Inc.**  
**Generalized for Typical Cone Fish Screen Project Installation**  
**Environmental Analysis of Pile Driving Impacts on Fishery Resources**  
**(Analysis is based on utilizing standard 12-inch steel pilings)**

**South Sutter Water District (SSWD) Fish Screen Project**

**Project Location:**

The Pleasant Grove Canal is located approximately 5.4 miles west of the City of Lincoln in southwest Placer County off of Auburn Ravine. The project site is located on Section 26, Township 12 North, Range 5 East, of the Pleasant Grove U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mount Diablo Baseline and Meridian. The centroid of the project site is 38°51'29" North and 121°23'10" West.

**Existing Site Information:**

SSWD operates a flashboard dam and gravity diversion on Auburn Ravine for agricultural purposes. The canal diverts up to 80 cfs from the impounded water that is typically about 3 feet to 4 feet deep at the canal entrance. There is no canal entrance structure at the head of the canal and all water flow and elevations are controlled at both the flashboard structure on Auburn Ravine and a canal check structure about 1,500 feet downstream of the canal. The flashboard dam is generally installed in April of each year and removed by mid-October to coincide with the irrigation season. The dam installation and regulation is necessary for the canal to operate.

During the winter months when the dam is removed, the canal invert is generally above the river surface elevation, except during high flow or flood events. The top of the canal banks are located below the high flow or flood water elevations so access to the site in the winter is not always possible. During the irrigation season, flows and water depths in Auburn Ravine are generally regulated so the canal surface elevation is relatively constant.

Access to the site is via a gated private road. The site is also adjacent to a protected vernal pool area and a mitigation bank. The area is riparian and wooded; however, the canal easement and access is free of heavy vegetation. The SSWD maintains an easement on the canal and its banks.

The canal entrance will have to be widened to accommodate the necessary screen area and some bank vegetation and embankment area will need to be excavated. Most of this work can be completed from the existing access road area.

**Project Description:**

Two, 14-foot diameter, cone shaped fish screens with self-cleaning brush cleaners will be placed at the existing intake canal entrance. Each screen will be placed on a 15-foot by 15-foot pile-supported steel base and connected to a 4-foot diameter culvert pipe to convey the screened water into the canal. A sheetpile headwall driven across the canal entrance will separate the canal from the Auburn Ravine. The two culvert pipes from the screens will pass through this sheetpile wall and discharge as shown on the plans. The screened pipes will discharge into a common outfall area behind the sheetpile wall to dissipate the pipe velocity before flowing into the unlined canal ditch.

A minimum area of 240 square feet of screen area must be provided to meet the fish screen velocity criteria of 0.33 feet per second. The two cones will provide about 280 square feet of screen surface when they are located in 2.5 feet of water. If the screen is fully submerged, or in at least 4 feet of water depth, there will be about 360 square feet of surface area available. The base of the screen will be placed just above the current sandy river bottom elevation which is about the current intake channel invert elevation. The large surface area is necessary to reduce headlosses so the canal can achieve its full gravity diversion capability when necessary.

The existing canal entrance will be widened to place the screens as shown on the plans. The river and canal bank slopes will be excavated down to the existing river bed elevation for this. Additional excavations will also be necessary to place the screen bases and pipes. Excavation will occur when the flashboard dam is removed and Auburn Ravine flows are minimal to reduce impacts.

A silt curtain or temporary barrier will be placed at the canal entrance to isolate the canal from the main river during the culvert and screen site installation and prevent turbidity or water quality issues in Auburn Ravine. This barrier will not be designed to prevent seepage or to dewater the canal as the culverts will likely be dug in the wet.

The screen's pile supported bases will be supported by five, eight-inch diameter piles. Each pile will be driven about 15 feet or to refusal. The base will be clamped and bolted to these piles at the proper elevation. The sheetpile headwall will also be driven into the canal bottom about twice as deep as it is tall. A walkway may be provided on top of the sheetpiles for better access to the screen area.

When the screens are installed and operational, screen access will be via the existing embankment road along the intake canal. The screens will be designed to be in-place year round; however, a crane or long reach excavator can be used to remove the screens if desired or if necessary.

The screen's brush cleaning system is operated by a hydraulic power system. A hydraulic power unit will be placed in an outdoor cabinet near the intake site and located above the flood elevation. Hydraulic hoses will be laid in a conduit along access road and to each screen unit.

All design work will be reviewed and approved by MBK Engineers. The screens, bases, sheetpile walls and other features will be designed for the expected river loads, erosive forces, and possible debris impacts.

### **Description of Piles and Pile Driving Activities**

ISI typically drives a number of in-water support pilings for the installation of fish screens on various diversions located within the Sacramento-San Joaquin River systems, tributaries and Delta region.

Pile driving activities normally occur between August 1 and October 15. ISI typically is able to drive between six (6) and ten (10) piles per day from a land-based crane utilizing 6-inch to 12-inch Standard Schedule 40 steel pipe pilings, with pile penetrations expected up to 40 feet below the existing ground surface. All pilings are normally driven in less than 10-feet of water and into a silt and stiff clay river bottom material.

### **Pile Driver Information**

ISI will be utilizing an APE Model 64X Vibratory Extractor pile driver for installation of pilings on 2014 fish screen projects (see attached driver specifications).

Vibratory hammers use oscillatory hammers that vibrate the pile, causing the sediment surrounding the pile to liquefy and allow pile penetration. Peak sound pressure levels for vibratory hammers can exceed 180 dB; however, the sound from these types of hammers rises relatively slowly. The vibratory hammer produces sound energy that is spread out over time and is generally 10 to 20 dB lower than impact pile driving.

Vibratory hammers can be feasible and utilized for pile installation, but it is typical that piles need to be proofed (i.e., tested for bearing capacity and structural integrity) with an impact pile driver. The project engineer may find it necessary to proof pilings using an impact type pile driver, but past experience has shown it has not been needed.

### **Noise Criteria**

Noise criteria is based on utilization of standard 12-inch steel piles. NMFS approved criteria for injury to fish from pile driving activities are 206dB peak and 187dB accumulated SEL for all fish greater than 2 grams. These criteria were developed based on scientific evaluation and are considered to be very conservative (Popper, et al. 2006 – referenced in Caltrans 2009). For example, assumptions number four in Appendix A of Popper, et al. (2006) states that the SEL criterion is based on exposure of fish weighing 0.01g. Furthermore, data from Hasting and Popper (2005) suggest that the “no injury” level for 0.01g occurs at 193dB SEL (referenced in Caltrans 2009).

The Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish (Caltrans 2009) summarizes anticipated unattenuated sound pressures for in-water pile driving using vibratory hammers. Based on the type of pile to be used for installation and the shallow site conditions (12-inch steel pipe pile), the peak and accumulated sound pressures are anticipated to be:

**Vibratory hammer: 192dB peak and 177dB accumulated**

The anticipated peak and accumulated sound pressure levels are below the threshold to injure fish (Table 1):

| Table 1. Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities  |                 |  |
|---|-----------------|--|
|   | Peak (<2g/60mm) | Accumulated (<2g/60mm)   |
| Interim Criteria for Injury <sup>1</sup>  | 206 dB          | 187 dB - for fish size of two grams or greater.<br><br>183 dB 0 for fish of less than two grams* |
| Anticipated Vibratory Hammer (12" Steel Pipe) <sup>2</sup>  | 192 dB          | 177 dB   |
| Source:<br><sup>1</sup> Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities. June 12, 2008 (attached).<br><sup>2</sup> Caltrans 2009. |                 |  |

Piles less than Standard 12-inch diameter are significantly less than the values shown above and many of the fish screen projects will be using smaller piles, such as 8-inch, if applicable to the project.

### **Impact Assessment**

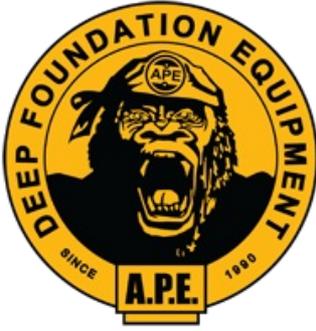
**Pile Driving Effects on Potential Prey (Fish):** Construction activities will produce both pulsed (i.e., impact pile driving) and continuous (i.e., vibratory pile driving) sounds. Fish react to sounds which are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005, 2009) identified several studies that suggest fish may relocate to avoid certain areas of noise energy (Caltrans 2009). Additional studies have documented effects of pile driving (or other types of continuous sounds) on fish, although several are based on studies in support of large, multiyear bridge construction projects (Scholik and Yan 2001, 2002; Govoni et al. 2003; Hawkins 2005; Hastings 1990, 2007; Popper et al. 2006; Popper and Hastings 2009 – referenced in Caltrans 2009). Sound pulses (SPLs) at received levels of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Chapman and Hawkins 1969; Pearson et al. 1992; Skalski et al. 1992 – referenced in Caltrans 2009). SPLs of sufficient strength have been known to cause injury to fish and fish mortality (CALTRANS 2001; Longmuir and Lively 2001 – referenced in Caltrans 2009). The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

**Pile Driving Effects on Potential Foraging Habitat:** In addition, the area likely impacted by the pile driving associated with fish screen installation is relatively small. Potentially a maximum of 1.82 m (19.6 ft) (based on a 60 in [1.5 m] diameter pile) of species foraging habitat may have decreased foraging value as each pile is driven. Avoidance by potential prey (i.e., fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

### **Measures to Further Reduce Potential Impacts to Fish**

Soft Start: The use of a soft-start procedure is believed to provide additional protection to fish species by warning, or providing fish species a chance to leave the area prior to the hammer operating at full capacity. The pile driving engineer will utilize soft-start techniques (ramp-up and dry fire) recommended by NMFS for impact and vibratory pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for fifteen seconds at reduced energy followed by a one minute waiting period. This procedure will be repeated two additional times.

Daylight Construction: Pile driving will only be conducted between two hours post-sunrise through two hours prior to sunset (civil twilight), between the periods of August 1st to October 15th. Should fish species be detected during pile driving, all pile driving activities will be ceased until fish exit project area.



## APE Model 64X Vibratory Driver Extractor Specifications

The Worlds Largest Provider of  
Foundation Construction Equipment



| SPECIFICATIONS          | DATA                  |
|-------------------------|-----------------------|
| Eccentric Moment        | 781 in-lbs (9.00 kgm) |
| Drive Force             | 59 tons (525 kN)      |
| Frequency Maximum (VPM) | 0 - 2,400 vpm         |
| Max Line Pull           | 51 tons (454 kN)      |
| Max Bare Hammer Weight  | 4,650 lbs (2,109 kg)  |
| Throat Width            | 13.75 in (35 cm)      |
| Length                  | 70.00 in (178 cm)     |
| Height w/o Clamp        | 42.50 in (108 cm)     |

## APE Model 275 Power Unit

| SPECIFICATIONS      | DATA                            |
|---------------------|---------------------------------|
| Engine Type         | Caterpillar C7 Tier III         |
| Horse Power         | 275 HP (202 kW)                 |
| Drive Pressure      | 0 - 4,800 psi (331 bar)         |
| Drive Flow          | 85 gpm (322 lpm)                |
| Clamp Pressure      | <a href="#">Consult Factory</a> |
| Clamp Flow          | <a href="#">Consult Factory</a> |
| Speed               | <a href="#">Consult Factory</a> |
| Weight              | 11,000 lbs (4,990 kg)           |
| Length              | 117 in (296 cm)                 |
| Width               | 59 in (149 cm)                  |
| Height              | 84 in (212 cm)                  |
| Hydraulic Reservoir | <a href="#">Consult Factory</a> |
| Fuel Capacity       | <a href="#">Consult Factory</a> |



Corporate Offices  
7032 South 196th  
Kent, Washington 98032



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|   |   |  |   |  |
|---|---|--|---|--|
| <i>NOAA's Fisheries<br/>Northwest and<br/>Southwest Regions</i> | <i>U.S. Fish and<br/>Wildlife Service<br/>Regions 1 &amp; 8</i> | <i>California/Washington/<br/>Oregon Departments<br/>of Transportation</i> | <i>California<br/>Department of<br/>Fish and Game</i> | <i>U.S. Federal<br/>Highway<br/>Administration</i> |
|---|---|--|---|--|

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MEMORANDUM

June 12, 2008

From: Fisheries Hydroacoustic Working Group

Subject: Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities

To: Applicable Agency Staff

The signatory agencies, identified below, have agreed in principle to use the attached Interim Criteria for Injury to Fish from Pile Driving Activities. The agreement was concluded at a meeting in Vancouver, Washington on June 10-11, 2008 with key technical and policy staff from the Federal Highway Administration, NOAA Fisheries, U.S. Fish and Wildlife Service, the Departments of Transportation from California, Oregon, and Washington; and national experts on sound propagation activities that affect fish and wildlife species of concern. The agreed upon criteria identify sound pressure levels of 206 dB peak and 187 dB accumulated sound exposure level(SEL) for all listed fish except those that are less than 2 grams. In that case, the criteria for the accumulated SEL will be 183 dB.

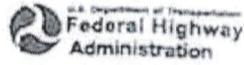
These criteria will apply to all new projects beginning no later than 60 days from the date of this memorandum. During the interim 60 day period, the Transportation Agencies will work with the Services to identify projects currently in the consultation process and reach agreement on which criteria will be used to assess project effects.

The agencies agree to review the science periodically and revise the threshold and cumulative levels as needed to reflect current information. Behavioral impacts to fish and impacts to marine mammals are not addressed in this agreement. Sub-injurious effects will continue to be discussed in future meetings.

The respective agencies also agree to develop appropriate training for staff on these revised criteria, as well as a process to review and possibly refine the criteria, when appropriate.

For questions or concerns about the revised criteria, we recommend staff contact their agency environmental coordinator or agency expert on pile driving issues.

*Carol S. Adkins*



Federal Highway Administration\*

\*FHWA supports the use of these interim criteria in the states signing this agreement in principle. FHWA leaves the schedule for implementation to the discretion of the state DOTs in cooperation with their respective FHWA Division Offices and the Services.

*Michael Johnson*



NOAA Fisheries - NWR

*Russell M. Strook*



NOAA Fisheries - SWR

*Ken S. Berg*



US Fish and Wildlife Service Region 1

*Michael E. Pagano*



US Fish and Wildlife Service Region 8

*[Signature]*  
California Department of Transportation



*[Signature]*  
California Department of Fish and Game



*[Signature]*  
Oregon Department of Transportation



**FHWG Agreement in Principle**  
**Technical/Policy Meeting Vancouver, WA**  
***June, 11 2008***

| <b>Interim Criteria for Injury</b> | <b>Agreement in Principle</b>  |
|------------------------------------|--|
| Peak                               | 206 dB (for all size of fish)  |
| Cumulative SEL                     | 187 dB - for fish size of two grams or greater.<br><br>183 dB - for fish size of less than two grams.* |

*\*see Table—to be developed*

# SOUTH SUTTER WATER DISTRICT

2464 Pacific Avenue  
Trowbridge, CA 95659  
(530) 656-2242

May 29, 2014

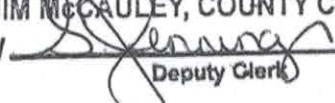
## NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION ON THE ENVIRONMENTAL IMPACT OF THE PLEASANT GROVE CANAL FISH SCREEN PROJECT

Notice is hereby given that the South Sutter Water District (SSWD), as Lead Agency, will consider the approval and adoption of a Mitigated Negative Declaration on the environmental impacts of the project entitled the Pleasant Grove Canal Fish Screen Project.

**PROJECT LOCATION:** The Proposed Project is located approximately 5.4 miles west of the City of Lincoln in Placer County, California along the Auburn Ravine. The Proposed Project would be located at the mouth of an existing agricultural ditch called the Pleasant Grove Canal at the confluence with the Auburn Ravine. The project location does not contain a listed toxic site.

**PROJECT DESCRIPTION:** The Proposed Project involves installation of a sheetpile barrier and two fish screens at a currently unscreened diversion on the Auburn Ravine. Construction of the Proposed Project will occur between September and November, which will minimize impacts to listed species, with all in-water work to be completed by October 15, to avoid impacts due to sedimentation. The design of the fish screens meets California Department of Fish and Wildlife (CDFW) and National Marine Fishery Service (NMFS) standards.

**PUBLIC REVIEW AND TIME FOR COMMENT:** The proposed Mitigated Negative Declaration and Initial Study are available for public review and comment, from May 29 through 30 days of the date of this notice. Copies of the proposed Mitigated Negative Declaration and the Initial Study may be viewed at the South Sutter Water District office at 2464 Pacific Avenue, Trowbridge, CA 95659 or by calling Annalee Sanborn at 916-447-3479 and requesting an electronic copy. Written comments on the document should be sent to the attention of Annalee Sanborn, 1801 7<sup>th</sup> Street, Suite 100, Sacramento, CA 95811, and must be received by close of business thirty days after publication of this notice.

POSTED 05 / 29 / 20 14  
Through \_\_\_\_\_  
JIM McCAULEY, COUNTY CLERK  
By   
Deputy Clerk

**SOUTH SUTTER WATER DISTRICT  
RESOLUTION NO. 3014-08**

**APPROVING AND ADOPTING A MITIGATED NEGATIVE DECLARATION ON THE  
ENVIRONMENTAL IMPACTS OF THE SOUTH SUTTER WATER DISTRICT  
PLEASANT GROVE CANAL FISH SCREEN PROJECT**

WHEREAS, the South Sutter Water District ("District") operates the Pleasant Grove Canal with water from Auburn Ravine ("Ravine"); and,

WHEREAS, the water is taken from the Ravine through an unscreened canal; and,

WHEREAS, the District sought funding, with the assistance of Family Water Alliance, to screen the canal, which would eliminate the potential to pull fish out of the Ravine and into the District's canal (the "Project"); and,

WHEREAS, the District obtained funding through the CVPIA Anadromous Fish Screen Program and the California Department of Fish and Game Ecosystem Restoration Fund to screen the District's canal; and,

WHEREAS, the installation of the necessary screens will provide the District with screened water that will protect fish in the Auburn Ravine; and,

WHEREAS, Analytical Environmental Services (AES) has prepared an Initial Study and Mitigated Negative Declaration for the Project; and,

WHEREAS, the proposed Mitigated Negative Declaration was circulated (State Clearinghouse #2014052092) for the required 30 days for public review and comment, from May 29, 2014 to June 28, 2014; and,

WHEREAS, public notice of Intent to Adopt the Mitigated Negative Declaration for the Project was posted at the District office and with the Placer County Clerk's office for the required 30 days, from May 29, 2014 to June 28, 2014; and,

WHEREAS, at the meeting held on July 31, 2014, the District Board considered the comments received during the public review period, the Mitigated Negative Declaration and all of its supporting documentation, and any comments received at the July 31, 2014, meeting.

NOW, THEREFORE, SOUTH SUTTER WATER DISTRICT hereby finds, determines and resolves the as follows:

1. A Notice of Intent to Adopt a Mitigated Negative Declaration was properly publicized within the meaning of 14 CCR 150725.
2. The Mitigated Negative Declaration was subject to proper public review as provided in 14 CCR 15073.

3. The Mitigated Negative Declaration was completed in compliance with CEQA Guidelines.
4. The Board has considered all comments received during the public review process and that no further modifications to the Project are necessary or required.
5. The Board hereby finds and determines that there is no substantial evidence, in light of the whole record before it, that the approval of the Project may have a significant effect on the environment, and the Mitigated Negative Declaration, attached hereto as Exhibit A and incorporated by reference herein, as provided for under Section 21080(c) of the Public Resources Code, is hereby approved; and that the Mitigated Negative Declaration reflects the Board's independent judgment and analysis.
6. Changes or alterations have been required in, or incorporated into, the Project which mitigate to avoid any potentially significant effects on the environment, and the Board adopts all of these measures which will avoid or lessen all the Project's potentially significant impacts, as set forth in Exhibit A.
7. The Board hereby approves and adopts the Mitigated Negative Declaration and authorizes and directs the Manager to execute the Mitigated Negative Declaration and file a Notice of Determination with the Placer County Clerk's office.
8. A mitigation monitoring and reporting program for reporting on or monitoring the changes which the Board has either required in the Project or made a condition of approval to mitigate or avoid significant environmental effects is provided in Exhibit A to this resolution and is hereby adopted.

PASSED AND ADOPTED this 31<sup>st</sup> day of July, 2014, by the following vote:

AYES: 4

NOES: 0

ABSENT: 2

SOUTH SUTTER WATER DISTRICT

By: [Signature]

Title: Board President

Attest:

[Signature]  
Secretary



# Notice of Determination

# Appendix D

**To:**

Office of Planning and Research  
 U.S. Mail: \_\_\_\_\_ Street Address: \_\_\_\_\_  
 P.O. Box 3044 1400 Tenth St., Rm 113  
 Sacramento, CA 95812-3044 , Sacramento, CA 95814

County Clerk  
 County of: Placer  
 Address: 2954 Richardson Drive  
Auburn, CA 95603

**From:**

Public Agency: South Sutter Water District  
 Address: 2464 Pacific Avenue  
Trowbridge, CA 95659  
 Contact: Annalee Sanborn  
 Phone: (916) 447-3479

Lead Agency (if different from above): \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Phone: \_\_\_\_\_

**SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.**

State Clearinghouse Number (if submitted to State Clearinghouse): 2014052092

Project Title: Pleasant Grove Canal Fish Screen Project

Project Applicant: South Sutter Water District

Project Location (include county): E. Catlett Road and Fiddymont Road, Placer County

**Project Description:**

Installation of a barrier and two fish screens across the mouth of the existing Pleasant Grove Canal where it meets the Auburn Ravine. This will allow water to be diverted without installing flashboards across the Auburn Ravine, which will improve fish passage on the ravine.

This is to advise that the South Sutter Water District has approved the above  
 Lead Agency or  Responsible Agency)

described project on 7/31/14 and has made the following determinations regarding the above  
 (date)  
 described project.

1. The project  will  will not] have a significant effect on the environment.
2.  An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.  
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures  were  were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan  was  was not] adopted for this project.
5. A statement of Overriding Considerations  was  was not] adopted for this project.
6. Findings  were  were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

Signature (Public Agency): Brad Arnold Title: General Manager

Date: 7/23/14 Date Received for filing at OPR: \_\_\_\_\_

Authority cited: Sections 21083, Public Resources Code.  
 Reference Section 21000-21174, Public Resources Code.

POSTED 08/07/2014  
 Through \_\_\_\_\_  
**JIM McCAULEY, COUNTY CLERK**  
 By [Signature]  
 Deputy Clerk

**FILED**  
 AUG 07 2014

Revised 2011

Jim McCauley  
 COUNTY CLERK OF PLACER COUNTY  
 BY [Signature]  
 DEPUTY

# 174