RECLAMATION

Managing Water in the West

Draft Environmental Assessment/Initial Study

County Service Area 34
Winchell Cove Pipeline Project

EA/IS-10-045

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
South-Central California Area Office
Fresno, California

Fresno County
Public Works
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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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List of Acronyms and Abbreviations

AB	Assembly Bill
APE	Area of Potential Effects
ARB	Air Resources Board
AWWA	America Water Works Association
BIA	Bureau of Indian Affairs
BMP	Best Management Practices
B.P.	Before Present
BRM	Bed Rock Mortars
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalFire	California Department of Forestry and Fire Prevention
CAP	Criteria Air Pollutants
CARB	California Air Resources Board
CBC	California State Building Code
CCAA	California Clean Air Act
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic-feet per second
CHP	California Highway Patrol
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CRHR	California Register of Historic Places
CSA	County Service Area
CTS	California Tiger Salamander
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibel
DPM	Diesel Particulate Matter
DWR	Department of Water Resources
EA	Environmental Assessment
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
FCFPD	Fresno County Fire Protection District
FEMA	Federal Emergency Management Act
FESA	Federal Endangered Species Act

FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FPT	Fluted Point Tradition
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FWCA	Fish and Wildlife Coordination Act
GHG	greenhouse gases
gpm	gallons per minute
IBC	International Building Code
IS	Initial Study
ITA	Indian Trust Assets
Ldn	Day-Night Average Sound Level
Leq	Noise Equivalence Level
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Decendent
MLSRA	Millerton Road State Reclamation Area
MMI	Modified Mercalli Intensity
MNT	Millerton New Town
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAGPRA	Native American Graves Protection and Reparation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NO_x	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	Natural Wetland Inventory
O_3	ozone
OHWM	Ordinary High Water Mark
O & M	Operate and Maintain
Pb	Lead
PCC	Portland cement-concrete
P-C	Production Consumption
PG & E	Pacific Gas & Electric
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PRC	Public Resources Code
ROG	reactive organic gasses
ROW	right-of-way
RWQCB	Regional Water Quality Control Board

SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJKF	San Joaquin Kit Fox
SJVAB	San Joaquin Valley Air Board
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SSJVIC	Southern San Juaquin Valley Information Center
SWPPP	Storm Water Pollution Protection Plan
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TMDL	total maximum daily loads
TMR	Table Mountain Rancheria
TSS	total suspended solids
UCMP	University of California Museum of Paleontology
URBEMIS	Urban Emmission model
U.S.	United States
Corps	U.S. Army Corps of Engineers
U.S. DOI	U.S. Department of the Interior
U.S.C	U.S. Code
USDA	U.S. Department of Agriculture
Service	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
WPLT	Western Pluvial Lakes Tradition
WST	Western Spadefoot Toad

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Section 1 Purpose and Need/Introduction

This Environmental Assessment/Initial Study (EA/IS) has been jointly prepared by the Bureau of Reclamation (Reclamation) as the lead federal agency and Fresno County (County) as the lead state agency to fulfill the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 et seq.) and the National Environmental Policy Act (NEPA) (42 U.S.C. §4321-4370). The focus of the NEPA environmental analysis within this EA/IS is the Reclamation's approval of a license to the County for the construction, operation and maintenance of a proposed water pipeline within lands owned by Reclamation (refer to **Figures 1**, **2**, and **3**). The focus of the CEQA environmental analysis within this EA/IS includes the entire scope of the Proposed Project described within **Section 2.0**.

While CEQA requires that a determination of significant impacts be stated in an IS, NEPA does not require this for an EA. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS) is required. An EA is the basis for developing information on which to determine significance, such as the context of the intensity of the impacts, while a separate document, the Finding of No Significant Impact (FONSI), documents when there are no significant impacts. If potentially significant impacts are identified then an EIS must be prepared.

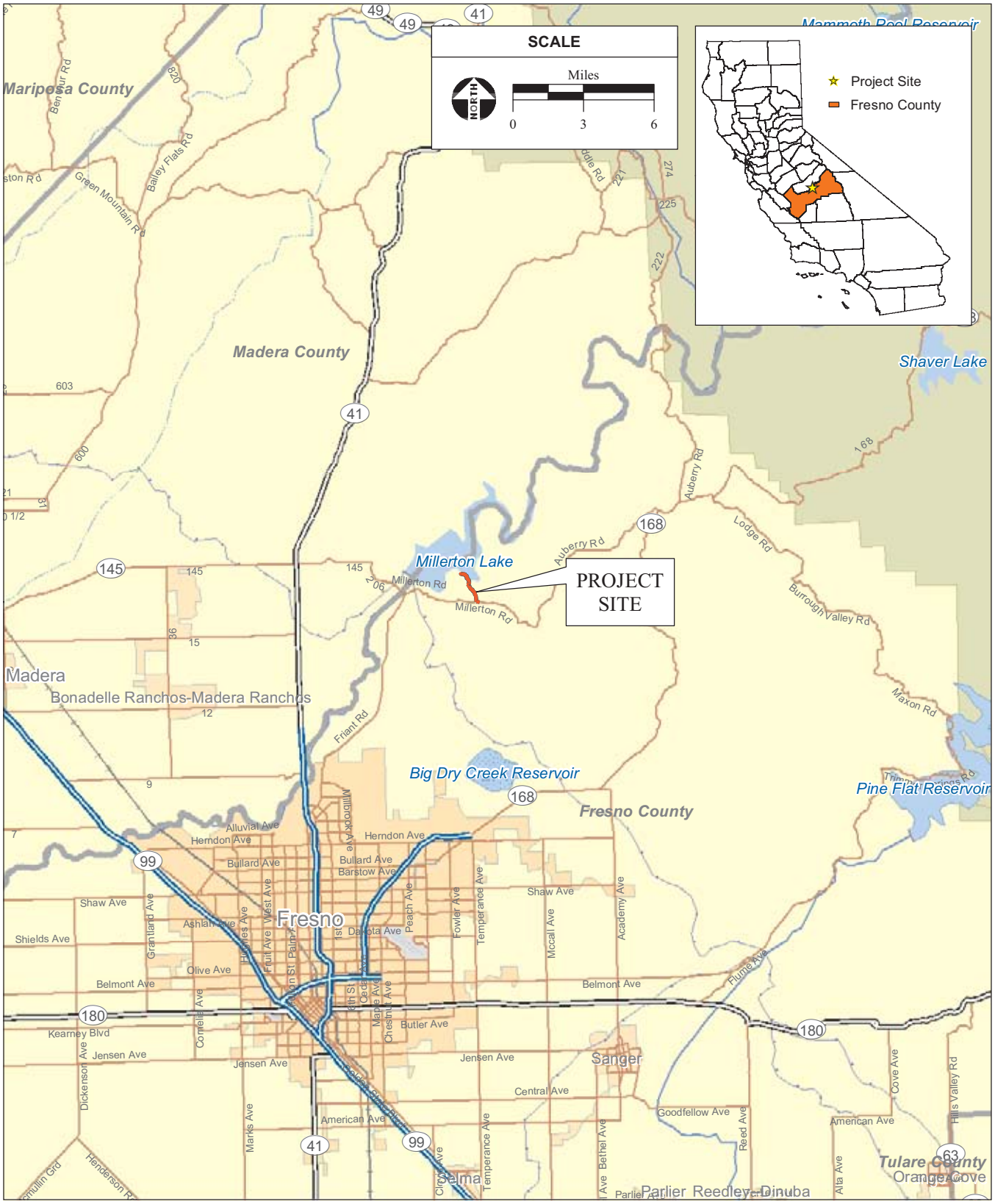
1.1 Background/Project Description

Millerton Lake was created as a result of construction of Friant Dam on the San Joaquin River, which is owned and operated by Reclamation. The Millerton Lake State Recreation Area (MLSRA) is maintained and operated by the California Department of Parks and Recreation on federal lands owned by Reclamation. In November of 1988, Reclamation entered into an agreement with the County and issued a license allowing the County to operate and maintain (O&M) a pump station, water pipeline, electrical conduits, transformers, and related electrical appurtenances located at Winchell Cove within the MLSRA. These facilities, which have been in operation since 1990, transport water to be used by County Service Area (CSA) 34 for domestic and irrigation purposes. The water transported through these facilities is Central Valley Project (CVP) water from Millerton Lake, and is available to the County through an exchange with the Arvin-Edison Water Storage District or other Friant Division CVP contractors.

CSA 34 Water System

CSA 34 encompasses the Millerton New Town Infrastructure Plan area. It is located on the north and south side of Millerton Road approximately 1.5 miles east of the community of Friant. The area includes approximately 1,903 acres.

Raw water is drawn from Millerton Lake by two pumps with electric motors on a platform submerged on the lake bottom. The pumps feed water through an attached check valve and manifold into a single 14 inch pipeline, which runs approximately 42 inches below the lake



SOURCE: ESRI Data, 2007; AES 2010

Winchell Cove Pipeline Project / 207518 ■

Figure 1

Regional Location

SOURCE: "Millerton Lake West, CA", and "Friant, CA" USGS 7.5 Minute Topographic Quadrangles
T11S R21E, Sections 2,3,10,11 Mt. Diablo Baseline and Meridian; AES, 2010

Figure 2
Site and Vicinity

SOURCE: Vestra Resources, Inc, for the California Legacy Project 2002; I-Cubed Aerial Photography, 2008; AES, 2010

Figure 3
Aerial Map

bottom, for about 200 feet before transitioning into a 12 inch pipeline. The existing pipeline generally follows the lake's shoreline to Winchell Cove Road, where it extends through an existing public utility easement located within land held in federal trust for the Table Mountain Rancheria to Millerton Road, then east on the north side of Millerton Road to the Brighton Crest development, and terminates at either a storage pond on the golf course or the Surface Water Treatment Plant and storage tank. In 2008, the annual water transmitted through the water system was 179,620,000 gallons, or approximately 492,110 gallons per day. The water is used by Brighton Crest community residents and the Eagle Springs Golf and Country Club.

Phase I of the Millerton Lake Pumps and Pipeline Improvement Project

The original lake pumps and pipeline were installed in 1989. In May 2009, one of the two original lake pumps failed, prompting the County to expedite a proactive solution to ensure that the CSA 34 water system would be able to continue providing water to its service area in the short and long-term should system failure occur again in the future. The County's Millerton Lake Pumps and Pipeline Improvement Project (Project) generally consisted of pump replacement, auxiliary back-up pumps, emergency pump connection, and a 12-inch parallel pipeline. During the summer of 2010, a check valve failed presumably due to excessive wear and tear caused by near-constant single pump operation. The County had to order a restricted use mandate on the Brighton Crest residents during peak summer use to ensure that the existing system could provide enough water during repair. The County was concerned that the one remaining pump would fail and leave the residents without water. As a result, Reclamation allowed the County to replace both existing pumps and motors, add two new auxiliary pumps for back-up, and install an emergency "T" connection on the pipeline outside the lake during renewal of the license agreement. (The new pumps have not increased the overall capacity of the system as they are intended to provide back-up to the existing pumps in the event of failure and provide alternatives to lessen wear on any one pump.) The 12-inch parallel pipeline would be constructed at a later date since it was still functional at the time and the risk of the one remaining pump failing was too great. Thus, the Project was broken up into Phases I and II. The environmental effects from Phase I of the Project have been addressed in the following documents:

- Millerton Lake State Recreation Area Winchell Cove Pumping Station and Water Line License Renewal , NEPA Categorical Exclusion Checklist, Bureau of Reclamation, June 24, 2009 (CEC-09-16)
- CSA 34 Millerton Lake Pumps and Pipeline Improvement Project Phase I, CEQA Categorical Exemption, County of Fresno, September 24, 2009 (ER 6135)

1.2 Purpose and Need/Project Objectives

The proposed parallel raw water pipeline would keep flow velocities at a level that will not cause excessive pipe wear, head loss, or water hammer in the system. Continued use of the existing pipeline could cause damage to the newly replaced pumps and result in large energy demands due to inefficient operation of the pumps and motors. Continued use of the existing pipeline could result in major damage to this facility in the long-term, resulting in substantial costs associated with repair and property damages. The Project is needed to provide system flexibility,

improve water supply reliability, and provide more efficient operations in the delivery of raw water to the existing users within CSA 34. In addition, the Project would provide CSA 34 water users with a contingency plan in the event of an emergency and system malfunction. An engineering memorandum outlining the need for the Project is provided within **Appendix D**. It is the objective of both Reclamation and the County to implement the Proposed Action in a manner that minimizes potential adverse environmental effects.

1.3 Scope

The Council on Environmental Quality (CEQ) regulations provide a definition of "scope" that instructs agencies to consider three types of actions (connected, cumulative, similar), and three types of impacts (direct, indirect, and cumulative) within EISs (40 California Code of Federal Regulations (CFR) 1508.25). CEQA Guidelines Section 15165 states: "Where one project is one of several similar projects of a public agency, but is not deemed a part of a larger undertaking or a larger project, the agency may prepare one Environmental Impact Report (EIR) for all projects, or one for each project, but shall in either case comment upon the cumulative effect." The concept of "independent utility" examines the inter-relationship and dependency issue of actions. Independent utility exists for a project provided that the project under consideration is not dependant on subsequent phases or approvals. CEQ uses the term "unconnected single actions" to describe this concept. If an action 1) does not automatically trigger other actions which may require environmental analysis, 2) does not require that other actions are taken previously or simultaneously in order to proceed, and 3) is not an interdependent part of a larger action and depend on the larger action for its justification, then the action demonstrates "independent utility" and the scope of the environmental analysis may be for the direct, indirect, and cumulative impacts of that action only (40 CFR 1508).

1.3.1 Project Scope

Reclamation's approval is limited to the issuance of a license to the County for the construction, operation, and maintenance of the proposed parallel pipeline (Proposed Action), and is the focus of the NEPA environmental analysis within this EA/IS. Similarly, the County's approval includes the remaining components of the Project as described within **Section 2.0**, and is the focus of the CEQA environmental analysis within this EA/IS. For the purposes of this EA/IS, the remaining components of the Project and the Proposed Action would be used interchangeably.

The Proposed Action is considered an improvement/maintenance project that is needed under existing conditions to serve existing demands in CSA 34. While the infrastructure may be utilized to provide water supply to future developments within the CSA 34 service area, specifically the Millerton New Town Specific Plan which is currently undergoing NEPA review by Reclamation for the approval of long-term water transfers to serve the development, no changes to water delivery or permitted capacity of the CSA 34 water system would result from the Proposed Action. The Proposed Action/Project analyzed in this EA/IS is a distinct undertaking with individual utility. Reclamation and the County can approve their respective actions without committing to approval of future developments that may utilize water from the CSA 34 system. As a result, the Project and the Millerton New Town Specific Plan

Development are two separate projects under CEQA and NEPA, and are properly analyzed in separate environmental documents.

Because the Project is needed under existing conditions, it represents a "stand-alone" action and demonstrates "independent utility." Potential cumulative effects of the Proposed Action when combined with reasonably foreseeable development in the project area are described in accordance with NEPA and CEQA requirements within **Sections 3** and **4** of this EA/IS.

1.4 Project Location and Setting

The Project is located within the MLSRA, in Fresno County, California (**Figure 1**). The MLSRA is located approximately 17 miles northeast of the City of Fresno, and 19 miles east of the City of Madera. The approximately 12.26-acre project site is located within Township 11 South, Range 21 East, Sections 3 and 10 of the Friant United States Geological Survey (USGS) 7.5-minute topographic quadrangle (quad) and Township 11 South, Range 21 East of the Millerton Lake West USGS quad. The centroid of the project site is 36° 59' 25.22" North, 119° 39' 27.8" West. A topographic map and an aerial photograph of the project site are shown in **Figures 2** and **3**, respectively.

1.5 Potential Environmental Issues

This EA/IS will analyze the affected environment of the Proposed Action in order to determine the potential direct, indirect, and cumulative impacts to the following resources:

- Water Resources
- Land Use
- Biological Resources
- Cultural Resources
- Socioeconomics / Environmental Justice
- Air Quality
- Global Climate
- Indian Trust Assets
- Executive Order - Indian Sacred Sites
- Aesthetics
- Agricultural and Forest Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation / Traffic

- Utilities and Service Systems

1.6 Required Permits and Approvals

If determined to be appropriate by the lead agencies, the following permits and approvals would be required:

Bureau of Reclamation

- Adoption of a FONSI and Mitigation and Monitoring Plan for the Proposed Action.
- Issuance of license to the County for the construction, operation, and maintenance of the proposed facilities within land owned by Reclamation.

Fresno County

- Adoption of a Mitigated Negative Declaration and Mitigation Monitoring Plan for the Proposed Project.

Other Approvals

- Section 404 Permit from U. S. Army Corps of Engineers (Corps) for potential impacts to wetlands and waters of the United States (U.S.) resulting from installation of pipeline within the Millerton Lake bed.
- California Department of Fish and Game (CDFG) Streambed Alteration Agreement for installation of the pipeline within the Millerton Lake bed.
- Regional Water Quality Control Board (RWQCB) Section 401 Certification.
- Consultation with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Federal Endangered Species Act (FESA) regarding potential impacts to federally-listed special status species resulting from the Proposed Action.
- Consultation with the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act regarding potential impacts cultural resources resulting from the Proposed Action.
- Consultation with the CDFG for impacts to state listed special status species.
- Encroachment Permit from the State of California, Department of Parks and Recreation, for construction in Winchell Cove Road outside of Reclamation land.

Section 2 Alternatives Including the Proposed Action

This EA/IS considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment. Alternatives to the proposed pipeline alignment were considered, but eliminated from detailed evaluation as these alternatives would require extending through previously undisturbed lands, and thus would not meet the project objective to minimize environmental impacts. Additionally, because the purpose and need for the Project is to improve the operational efficiency of the existing CSA 34 water supply infrastructure, the current alignment is necessary to facilitate the laterals proposed between the existing and proposed pipeline to ensure even pressure throughout the system.

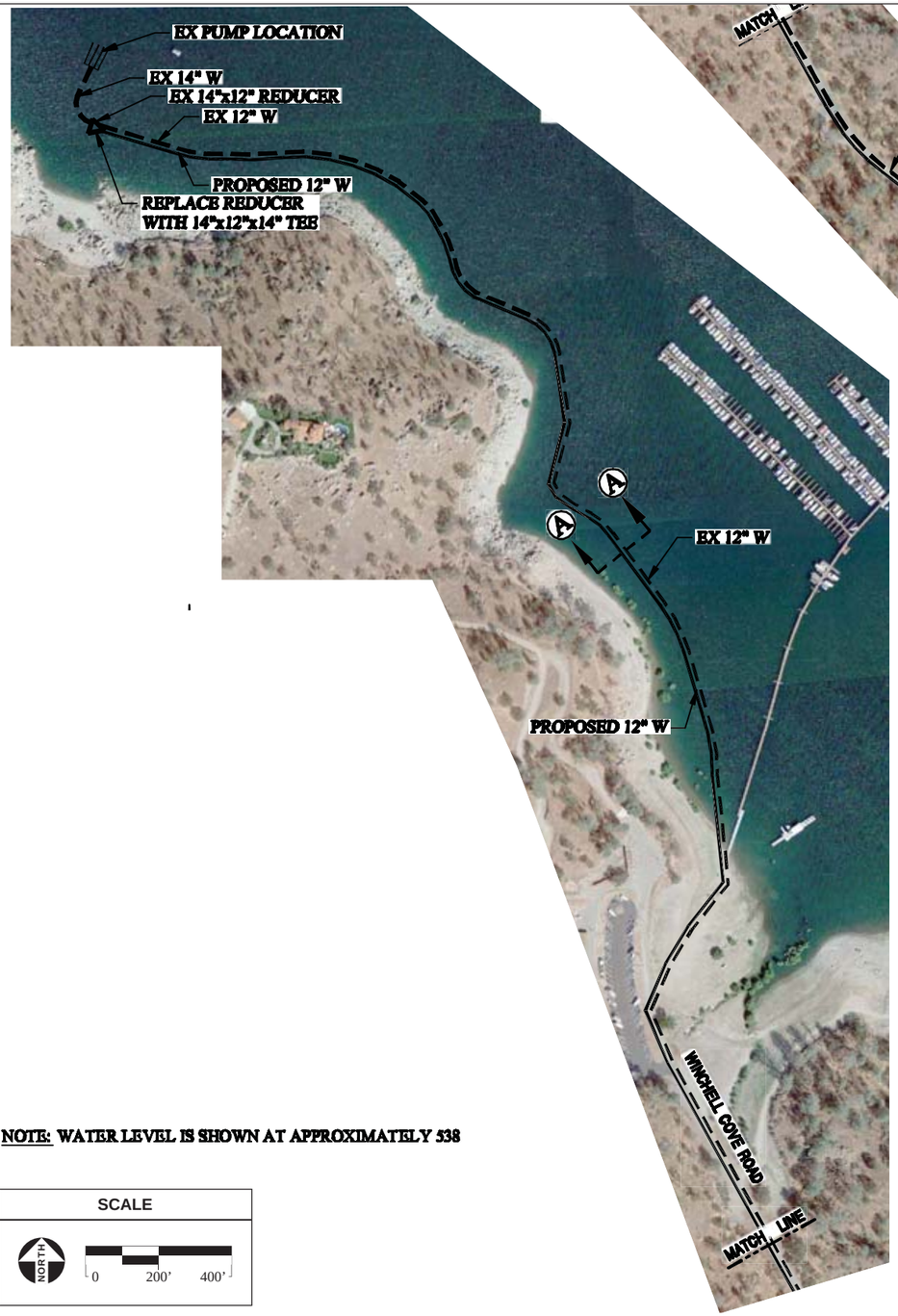
2.1 No Action Alternative

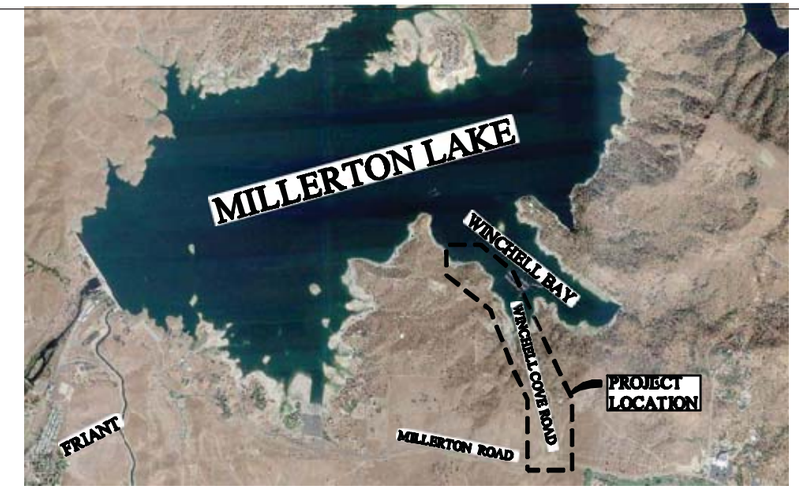
Under the No Action Alternative, the 12-inch parallel pipeline would not be developed and the existing CSA 34 pipeline would continue to operate under existing conditions. Continued use of the existing pipeline at full design capacity is likely to result in significant damage to this facility in the long-term, resulting in interrupted water service to existing water users within CSA 34 and substantial costs associated with repair and property damages.

2.2 Proposed Action

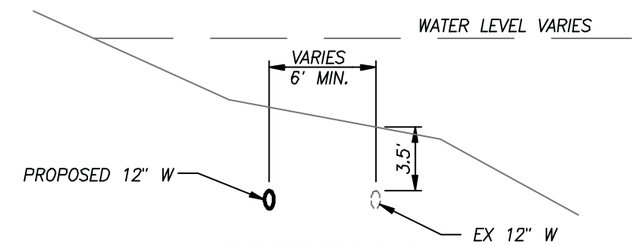
The Proposed Action is intended to build off of Phase I of the CSA 34 Millerton Lake Pumps and Pipeline Improvement Project and involves the construction of a parallel pipeline extending from the Winchell Cove submerged pump station. The new pipeline would branch from where the existing pipeline reduces from 14 to 12 inches or at the blind flange on either side of the platform, and would run parallel with the existing CSA 34 12-inch pipeline. From the pumps, the pipeline would extend for approximately 0.56 miles through the Millerton Lake bed to the Winchell Cove Marina. From the marina, the pipeline would be installed within the County's existing CSA 34 pipeline easement, extending for approximately 0.5 miles south within the Winchell Cove Road paved right-of-way, where it would transition through a public utility easement located within land held in federal trust for the Table Mountain Rancheria for approximately 1,600 feet in a southeasterly direction and terminate just north of Millerton Road (**Figure 4**).

The proposed pipeline would have a diameter of 12 inches, and a capacity of up to 2,500 to 3,000 gallons per minute (gpm). The proposed pipeline would be constructed of ductile iron or welded steel for the first one-half mile and then transition to 12-inch polyvinyl chloride (PVC) pipe for the remaining distance. Where appropriate, cross connections with the existing pipeline would be installed to ensure even pressure and travel velocities in both pipelines. A tee valve connection, meter, and blind flange north of Millerton Road would connect Table Mountain Rancheria to the raw water system, consistent with the Millerton New Town



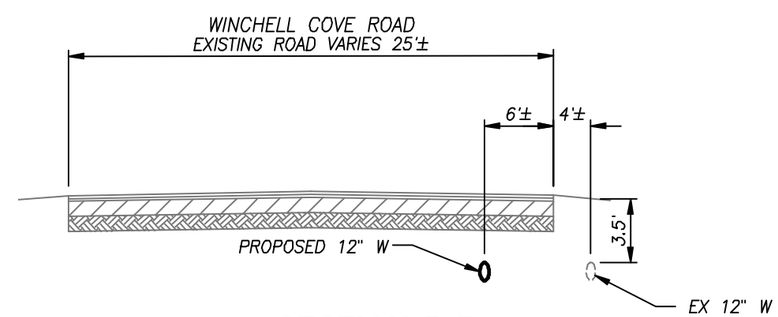


VICINITY MAP



SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

NOTE: WATER LEVEL IS SHOWN AT APPROXIMATELY 538

SCALE

NORTH

0 200' 400'

SOURCE: Quadknopf, 2010; AES, 2010

Figure 4
Site Plan

Infrastructure Plan (Rabe Engineering, 2000). The Proposed Project would not adjust the CSA 34 service area boundary, nor increase water supply capacity over current water rights.

The Proposed Action would require Reclamation's approval of a license agreement with the County to construct, operate, and maintain the proposed pipeline within lands owned and managed by Reclamation, which includes the portion of the pipeline that extends from the pumps to the marina. The extent of Reclamation's license approval is indicated in **Figure 3**.

2.2.1 Staging

Staging areas would be utilized in areas near construction sites to store pipe and other materials, construction equipment, and other necessary items. These areas would be located in previously disturbed areas where sensitive biological resources are not present.

2.2.2 Construction Timeline

Construction is anticipated to begin in summer 2011, and would last for approximately up to 6 months. Construction activities would be limited to the hours of 6 a.m. to 9 p.m. Monday through Friday, and 7 a.m. to 5 p.m. on Saturday or Sunday, in accordance with the Fresno County noise ordinance. To the extent feasible, construction activities within the ordinary high water mark (OHWM) of Millerton Lake would be coordinated to coincide with periods when water levels in Millerton Lake are below the project footprint.

2.2.3 Construction Methods

Project components would be designed and constructed in accordance with applicable provisions of the American Water Works Association (AWWA) Standards, California State Building Code (CBC), and the International Building Code (IBC). Components of the Proposed Action would require general construction activities including grading, excavating, trenching, pipe installation, placement of backfill, and asphalt patching.

Trenching

Pipelines would be constructed using open cut trenching. Open cut trenching requires clearing of the pipeline alignment, saw cutting pavement where necessary, excavation of the trench, pipeline installation, backfill operations, and surface restoration (described below).

Estimated trench width for a 12-inch-diameter pipeline would be approximately 24 inches and the trench depth would vary as needed with a minimum of 48 inches of cover from finished grade. Depending on site conditions or terms of the encroachment permit for construction with Winchell Cove Road, trenches would be secured at the end of each workday by either covering with steel plates, backfill material, or installing barricades to restrict access.

Surface Restoration Techniques

Surface restoration techniques would be employed after segments of pipeline construction are completed. All surfaces and roadways would be restored to pre-project conditions. This would include restoring unpaved areas by planting grasses and native vegetation, and repaving of

roadways. If required by the encroachment permit for construction with the Winchell Cove right-of-way, an asphalt overlay, slurry seal, or chip seal may be utilized.

2.2.4 Equipment and Materials

Energy efficient construction equipment would be utilized to the extent feasible. The following equipment may be utilized during construction of the project:

Pavement saw	Flat-back delivery truck
Jack hammers	Concrete trucks
Excavators	Sweepers
Front-end loaders	Road grader
10-wheel dump trucks	Paving equipment: back hoe, asphalt hauling trucks,
Crane	compactors, paving machine, rollers
Bulldozers	Concrete pumper trucks
Water truck	Welding trucks
Trench shields	Side boom pipe handler tractor
Air compressors	Earth mover

2.2.5 Operation and Maintenance Activities

Periodic maintenance of the proposed pipeline and appurtenant structures would be required after the Project is operational. Piping, valves, and appurtenant structures would be checked and maintained, and replaced as necessary. Maintenance activities are not expected to increase over current levels for the existing CSA 34 pipeline, and may decrease due to more efficient operation.

2.2.6 Environmental Protection Measures

The County would implement the environmental protection measures listed in **Table 2-1** to reduce environmental consequences associated with the Proposed Action, these measures are expanded in **Sections 3.0** and **4.0** under their respective issue areas. Environmental consequences for resource areas assume the measures specified would be fully implemented.

TABLE 2-1
Environmental Protection Measures

Resource	Protection Measure
Water Resources	**WR-1:** Construction contractors shall comply with the State's National Pollution Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit). The Central Valley Regional Water Quality Control Board (CVRWQCB) requires that all construction sites have adequate control measures to prevent the discharge of sediment and other pollutants to streams. To comply with the permit, the Applicant will file a Notice of Intent (NOI) with the CVRWQCB and prepare a Stormwater Pollution Protection Plan (SWPPP) prior to construction. A copy of the SWPPP must be obtained and remain onsite during construction activities. Control measures are required prior to and throughout the rainy season. Water quality Best management Practices (BMPs) to be identified in the SWPPP are listed in **Section 3.1.3**.

Resource	Protection Measure
Biological Resources	**BIO-1:** A Biological Opinion with an incidental take statement shall be obtained from the Service and an Incidental Take Permit shall be obtained from the CDFG for impacts to California Tiger Salamander (CTS) prior to construction. All conditions of the statement and permit, including preservation and compensatory measures required by Service and by CDFG, shall be implemented. Future maintenance and operations activities for the Proposed Action shall be covered within the statement and permit. At a minimum, the proposed mitigation measures to be implemented to compensate for take of CTS are listed in **Section 3.3.3**.. **BIO-2:** Mitigation measures shall be implemented to avoid temporary impacts to potential habitat for Western Spadefoot Toad (WST) and American badger as listed in **Section 3.3.3**. **BIO-3:** Mitigation measures shall be implemented to avoid impacts to potential nesting habitat for Swainson's hawk as listed in **Section 3.3.3**. **BIO-4:** Mitigation measures shall be implemented to avoid project-related impacts to nest sites for birds of prey and migratory birds as listed in **Section 3.3.3**. These measures would also mitigate for impacts to roosting bats. **BIO-5:** Conservation measures shall be implemented to avoid potential short-term adverse effects to San Joaquin Kit Fox (SJKF) in accordance with the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance* (2011) (Recommendations) for linear projects as listed in **Section 3.3.3**. **BIO-6:** Mitigation measures shall be implemented to avoid potential short-term adverse effects to waters of the U.S.as listed in **Section 3.3.3**.
Cultural Resources	**CR-1:** In the unlikely event that previously unknown cultural materials, such as flaked stone, groundstone, or historic debris are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop treatment measures in consultation with appropriate agencies in accordance with 36 CFR Part 800.13. In the case of such a discovery, Reclamation's archaeologists shall be notified and be given an opportunity to assess the find prior to work starting again in the immediate vicinity of the find. **CR-2:** If human remains are encountered on non-Federal and non-Tribal lands, work shall halt in the vicinity of the discovery and the Fresno County Coroner shall be notified immediately. At the same time, an archaeologist shall be contacted to evaluate the find. If the Coroner determines that the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this determination. The Most Likely Descendant (MLD) of the deceased will be contacted by the NAHC, and work will not resume until the MLD has made a recommendation for the treatment of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. Work may resume if NAHC is unable to identify an MLD or the descendant fails to make a recommendation within 48 hours. **CR-3:** Pursuant to Reclamation Directives and Standards LND 07-01, the inadvertent discovery of human remains on Reclamation land shall require immediate oral notification of the find to Reclamation cultural resources staff, as well as a written report of the discovery within 48 hours. Additionally, activity in the area shall cease and the find stabilized and protected until authorization to proceed is provided by Reclamation. Such discoveries require compliance with all appropriate Federal cultural resources laws and may require further Section 106 consultation. If the human remains are determined to be Native American, the discovery shall be handled in accordance with Native American Graves Protection and Reburial Act (NAGPRA) regulations (43 CFR Part 10).

Resource	Protection Measure
	CR-4: If human remains are encountered on Tribal lands, work shall halt in the vicinity of the find and the Fresno County Coroner, Reclamation archaeologist(s), and the Table Mountain Rancheria's Cultural Resources Director shall be notified immediately, pursuant to 36 CFR Part 800.13 of NHPA, Post-Review Discoveries, and 43 C.F.R.§ 10.4 (2006) of NAGPRA, Inadvertent Discoveries. No further ground disturbance shall occur in the vicinity of the find until the County Coroner, Tribal Official, and Reclamation archaeologist have examined the find and agreed on an appropriate course of action.
Air Quality	**AQ-1:** The project proponent shall ensure through contractual obligations that the particulate matter (PM) control measures listed in **Section 3.6.3** are implemented during construction, as required by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
Global Climate	**AQ-2:** The project proponent shall ensure through contractual obligations that the best management practices listed in **Section 3.7.3** are implemented during construction to minimize GHG emissions.
Geology and Soils	**GS-1:** To eliminate potential impacts resulting from excessive erosion and loss of topsoil, the project proponent shall comply with the NPDES Construction General Permit, including implementation of appropriate erosion and sediment control measures. Compliance with the General Permit requires developing a site specific SWPPP that shall identify the location of temporary erosion control features necessary to direct and filter stormwater runoff during construction activities. Temporary erosion control features used during construction may include, but are not limited to, silt fences, fiber rolls, erosion control blankets, temporary sediment basins, and rock bag dams. The SWPPP shall also identify BMPs that would reduce the transportation of pollutants offsite. The SWPPP shall be implemented during the construction and operation of the project. The above mitigation will also minimize impacts to Water Quality. **GS-2:** All underground facilities shall be designed using durable materials. All project facilities shall be designed in accordance with the National Association of Corrosion Engineers (NACE) standards for special coatings and/or cathodic protection systems using specific soils data.
Hazards and Hazardous Material	**HZ-1:** The mitigation measures listed in **Section 4.1.8.3** are recommended to decrease the risk of fire during construction of the Proposed Project.
Transportation/Traffic	**T-1:** The County shall ensure, through contractual obligations, that the mitigation measures listed in **Section 4.1.16.3** to reduce or eliminate construction-related traffic impacts are implemented. This will include the preparation of a traffic control plan, coordination with local emergency service providers, and maintaining at least one open lane of traffic on Winchell Cove Road at all times.

Section 3 Affected Environment and Environmental Consequences

This section describes the baseline conditions of the existing environment that may be affected by the Proposed Action and the potential environmental consequences of that action, and recommends mitigation measures, where applicable, to reduce the severity of any potential effects.

Cumulative Impacts

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Both CEQA and NEPA require that cumulative impacts be discussed when the project's incremental effect is cumulatively considerable. These impacts are discussed when appropriate in the relevant issue areas discussed below.

The cumulative setting includes past, present and reasonably foreseeable future actions not part of the proposed action but related to cumulative effects. This includes projected growth and zoning as detailed in the Fresno County General Plan, the Sierra North Regional Plan, and the Millerton New Town Specific Plan. Major development projects proposed within two miles of the project area are listed below and are assumed under cumulative conditions:

- Ventana Hills – 91 lots
- Mira Bella – 56 lots
- Brentwood at Brighton Crest – 420 home sites
- Millerton New Town – 3,500 home sites
- Friant Ranch – approximately 2,900 home sites
- Wellington Ranch – 5,500 home sites

3.1 Water Resources

The Federal Water Pollution Control Act (33 USC §1251 et. sec.), otherwise known as the Clean Water Act (CWA), sets forth national goals that waters shall be "fishable, swimmable" waters (CWA Section 101 (a)(2)). To enforce the goals of the CWA, the Environmental Protection Agency (EPA) established the NPDES program. NPDES is a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. Under §1251 (b) of the CWA, Congress and the EPA must recognize and preserve the primary responsibilities and rights of States concerning the reduction of pollution in water resources. The Porter-Cologne Water Quality Control Act (Porter-Cologne) gives the ultimate authority over California water rights and water quality policy to the California State Water Resource Control Board (SWRCB). The Porter-Cologne also established nine Regional Water Quality Control Boards (Regional Boards) to ensure that water quality on local/regional levels is maintained.

3.1.1 Affected Environment

The Project area is under the jurisdiction of the CVRWQCB. Approximately 0.56 miles of the proposed pipeline alignment would be constructed within the lakebed of Millerton Lake which is a designated water of the U.S. under the jurisdiction of the Corps. Millerton Lake reservoir was created through the construction of Friant Dam across the San Joaquin River. The lake and dam are operated by Reclamation. The lake's uses include water storage, recreational activities, irrigation, and flood control (Reclamation, 2009). The San Joaquin River and the Friant-Kern Canal lie approximately 2 miles west of the proposed pipeline alignment. The San Joaquin River flows southwest from Friant Dam then north to the Sacramento-San Joaquin River Delta. The Friant-Kern Canal carries water from the Friant Dam south to the Kern River where it supplies irrigation water for Fresno, Tulare, Kings, and Kern Counties (Reclamation, 2009).

Watershed

The subject property is located in the Upper San Joaquin (Hydrologic Unit Code 18040006) watershed and the Little Dry Creek local watershed. The San Joaquin River basin covers 15,880 square miles and has approximately 1.6 million acre feet in surface runoff a year. The Basin includes the San Joaquin River from north of the Tulare Lake basin to the Sacramento-San Joaquin Delta and all the tributaries in between. The majority of the San Joaquin River flow is diverted south into the Friant-Kern Canal at Friant Dam on Millerton Lake (Waterboard, 2002).

Surface water run-off from project area drains as sheet flow either north into Millerton Lake or south to the unnamed Tributary to Little Dry Creek. The Unnamed Tributary intercepts Little Dry Creek approximately 4.96 miles southwest of the proposed pipeline alignment.

Floodplain

Executive Order 11988 pertaining to floodplain management states that each agency shall "provide leadership and shall take action to reduce the risk of flood loss." In order for each agency to carry out its responsibility, the order requires that each agency determine whether a project is located on a floodplain and consider alternatives to a project's location within a flood plain. If the project must reside on a flood plain, the agency must minimize any potential impacts.

Federal Emergency Management Agency (FEMA) designates flood risk areas based on a parcel's location in respect to 100-year flood plains. A 100-year flood is the flood elevation that has a 1 percent chance of being equaled or exceeded each year. FEMA prepares Flood Insurance Rate Maps (FIRMs) that show the flood risk designations of lands throughout the United States. FIRM number 060191035 shows that the majority of the proposed pipeline alignment is classified as Zone X (FEMA, 2001); Zone X is designated for those lands that are outside the 100-year floodplains. However, the portion of the proposed pipeline that is within the lakebed of Millerton lake is classified as Zone A, Zone A is designated for those lands subject to inundation by the 100-year flood for which no base flood elevations have been determined.

Surface Water Quality

Section 303(d) of the CWA requires that each State identify those waters within its boundaries that do not meet the water quality standards that have been set for them. The State must then

develop Total Maximum Daily Loads (TMDL) for these impaired waters. TMDL is a calculation of the maximum amount of a pollutant that a water body can receive, from both point and nonpoint sources, and still meet water quality standards. A TMDL must also include a margin of safety to ensure that the water body will remain within the water quality standards. The San Joaquin River from Friant Dam to Mendota Pool is listed as being impaired due to exotic species; the anticipated date for TMDL submittal is September 2019. The 2006 list of impaired waters published by the EPA does not list Millerton Lake and Little Dry Creek; therefore, TMDLs have therefore not been assigned to these water bodies.

Groundwater Resources

The project area is not located within a groundwater basin as defined by the California Department Water Resources. The majority of the proposed pipeline alignment contains three overlapping aquifer zones (Table Mountain Rancheria [TMR], 2004). The first layer is made up of narrow zones of shallow alluvium. This zone is very limited in is extent and depth. The second zone, which extends over most of the region, is made up of weathered granitic bed rock and associated soils. The weathered granitic zones range from approximately 30-100 feet deep. Both the first and second zones have fair to good porosity and permeability. The third aquifer zone is the main water-producing unit with underlying granitic bedrock that extends up to over one thousand feet deep.

3.1.2 Environmental Consequences

3.1.2.1 No Action

Typically, CSA 34 delivers approximately 500 acre feet of water annually for municipal and industrial purposes (Brighton Crest community residents and Eagle Springs Golf and Country Club). CSA 34 draws their water directly from Millerton Lake via existing facilities as described in **Section 1.1**.

Under the No Action Alternative, the proposed maintenance and improvements to the existing CSA 34 water system would not be installed. Continued use of the existing pipeline at full design capacity is likely to result in significant damage to this facility in the long-term, resulting in interrupted water service to existing water users within CSA 34.

Under the No Action Alternative, potential temporary effects to water quality from contraction activities would not occur. Should the system fail, a separate environmental review would occur; any potential impacts to water resources would be identified at that time.

3.1.2.2 Proposed Action

Surface Water Quality and Drainage

Inland Construction

Construction would involve earth moving, grading, trenching, and excavation activities, which would result in the temporary alteration of the existing topography of the project site in excess of one acre. These activities could result in temporary changes to on-site drainage patterns, potentially resulting in increased erosion or siltation associated with construction. Water quality decreases with increased turbidity and total suspended solids (TSS) that result from erosion and siltation of stockpiled soil or open excavations, influencing downstream ecology. Construction

equipment and materials have the potential to leak fluids, thereby discharging additional pollutants into stormwater. Construction-site pollutants may include sediments, oils and greases, concrete, paints, and adhesives. Discharge of these pollutants could result in contamination of surface waters. Erosion and discharge of pollutants during construction could result in adverse effects to water quality.

To mitigate these potential effects, required erosion and pollutant control measures would be employed in compliance with the NPDES General Construction Permit prior to and throughout construction, as identified in **Mitigation Measure WR-1**. The permit requires the preparation and implementation of a SWPPP that includes BMPs that will prevent impacts to surface water and groundwater quality from erosion, sediment, trash, and other pollutants. The SWPPP will identify BMPs and the location of erosion control features recommended to direct and filter stormwater runoff during construction of the proposed pipeline. Standard BMPs that may be applicable to the Proposed Action are listed below under **Mitigation Measure WR-1**. Implementation of these measures will reduce the potential for adverse effects to water quality as a result of construction activities.

Lake Bed Construction

Construction of the proposed pipeline within the lakebed of Millerton Lake would not occur while the lakebed is submerged. Millerton Lake is typically at its lowest level in the fall of every year after water has been released for irrigation during the summer. When the high water level falls below the proposed pipeline alignment, construction would commence using the same methods as the inland construction. After construction, all surfaces will be graded and restored to existing elevations and conditions. As with inland construction, potential short-term impacts to surface waters may occur. A Section 404 Permit from the Corps and Section 401 water quality certification from the CVRWQCB will be required for impacts to wetlands and waters of the U.S. resulting from installation of pipeline within the Millerton Lake bed. Implementation of **Mitigation Measure WR-1** would reduce the potential for adverse effects associated with construction activities.

Operation and Maintenance

All project features will be located underground, and all surfaces will be graded and restored to existing elevations after construction is completed. No modification of existing drainage patterns will occur as a result of operation of the Proposed Action. No pollutants would be discharged into any navigable waters during operation and maintenance activities under the Proposed Action so no permits under the CWA are required. As discussed in **Section 2.0**, the Proposed Action would not increase the quantity of diversion from Millerton Lake beyond that previously approved by Reclamation.

Groundwater

Groundwater pumping rates would not increase as a result of the Proposed Action, and impervious surfaces would not be developed that would affect groundwater recharge rates. Water quality protection BMPs required by **Mitigation Measure WR-1** would prevent contamination of groundwater during construction. Under CEQA, because the Proposed Action would not deplete groundwater supplies or affect groundwater recharge, no impacts to groundwater are expected to occur.

Flood Hazards, Flood Plains

The majority of project alignment is located in areas designated by FEMA as being outside of a 100- and 500-year flood event. Approximately 0.56 miles of the proposed pipeline would be located within the Millerton Lake bed, which is designated as Flood Zone A, subject to inundation by the 100-year flood. However, all project features will be located underground, and all surfaces will be graded and restored to existing elevations and conditions after construction is completed. Thus, the project would not place fill within a floodplain, or alter or redirect flood flows. The project area is not subject to a seiche, tsunami, or mudflow; therefore, no impacts are anticipated to occur.

3.1.2.3 Cumulative Impacts

Water

Construction of the Proposed Action and potential cumulative projects in the vicinity of the project site would be required to comply with the NPDES General Permit, which is intended to reduce the potential for cumulative impacts to water quality during construction.

The Proposed Action would not result in additional stormwater run-off or contribute to cumulative effects associated with drainage. Similar to the Proposed Action, cumulative development projects would be subject to local, state, and federal regulations designed to minimize cumulative impacts to water resources. Mitigation measures for the Proposed Action in combination with compliance with City, state, and federal regulations, are expected to reduce cumulatively considerable impacts to water quality.

Flooding

The project site is located outside of a designated floodplain. As discussed above, operation of the Proposed Action would not introduce new impervious surfaces which would result in additional off-site flows; therefore, the Proposed Action would not contribute to cumulative flood related impacts.

3.1.3 Mitigation

WR-1 Construction contractors shall comply with the State's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit; Order No. 2009-0009-DWQ, NPDES No. CAS000002). The CVRWQCB requires that all construction sites have adequate control measures to prevent the discharge of sediment and other pollutants to streams. To comply with the permit, the Applicant will file a NOI with the CVRWQCB and prepare a SWPPP prior to construction. A copy of the SWPPP must be obtained and remain onsite during construction activities. Control measures are required prior to and throughout the rainy season. Water quality BMPs identified in the SWPPP may include, but would 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. No disturbed surfaces will be left without erosion control measures in place during the winter and spring months.

- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.
- A spill prevention and countermeasure plan shall be developed which will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite. The plan will also require the proper storage, handling, use, and disposal of petroleum products.
- Construction activities shall be scheduled to minimize land disturbance during peak runoff periods. 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 revegetated after completion of construction activities.
- All necessary permits and approvals shall be obtained.
- Provide sanitary facilities for construction workers.

3.2 Land Use

3.2.1 Affected Environment

Land use activities in the unincorporated areas of Fresno County are regulated by the Fresno County General Plan (2000a), area and specific plans, and the Fresno County Zoning Ordinance. The Sierra North Regional Plan (1982) and the Millerton Specific Plan (2004) are the guiding land use plans for the project area.

Zoning

Zoning designations surrounding the proposed pipeline alignment consist of General Commercial, Multiple Family Residential, Recreational, Open Conservation, Single family Residential Estate, and Exclusive Agriculture.

Land Use

The Sierra North Regional Plan designates land uses for the area north of the Kings River and east of the Friant-Kern Canal (approximately 2,270 square miles). A portion of the proposed pipeline alignment is within the Sierra North Regional Plan. Surrounding land use designations as identified in the Sierra-North Regional Plan consist of low density residential, eastside rangeland, and public lands and open space to the north.

The southernmost portion of the proposed pipeline alignment is within the Millerton Specific Plan Area. Surrounding land use designations as identified in the Millerton Specific Plan (adopted 1984 and last updated December 2004) consist of Medium Density Residential, Medium High Density Residential, Service Commercial, and Special Commercial.

Existing Land Uses

Land uses in the vicinity of the proposed pipeline alignment consist primarily of agriculture, rural residential development, and recreational uses. MLSRA is located to the west of the proposed pipeline alignment. Table Mountain Rancheria Casino is located approximately one mile east of the proposed pipeline alignment at Sky Harbor Road and Millerton Road. The Mira Bella subdivision is being developed approximately two and half miles southwest of the proposed pipeline alignment. The Eagle Springs Golf and Country Club is located immediately southeast of the proposed pipeline alignment. Land uses immediately surrounding the proposed pipeline include recreation at the Winchell Cove Marina and open space.

3.2.2 Environmental Consequences

3.2.2.1 No Action

Under the No Action Alternative, no changes to existing land use would occur.

3.2.2.2 Proposed Action

The Proposed Action would not alter any existing land uses and thus would be consistent with the existing zoning, the Fresno County General Plan, the Sierra North Regional Plan, and the Millerton Specific Plan. The proposed pipeline would not increase water supplies over existing water rights, and would not support growth that has not been previously analyzed within approved land use plans. Construction and operation of the Proposed Action would not result in conflicts with existing land uses. The proposed pipeline alignment would be underground; therefore, would only have temporary impacts to land use.

3.2.2.3 Cumulative Impacts

The proposed pipeline alignment is consistent with the existing zoning, the Fresno County General Plan, the Sierra North Regional Plan, and the Millerton Specific Plan; therefore no adverse cumulative impacts would occur. All ground disturbances would be temporary.

3.3 Biological Resources

Federal Endangered Species Act

Under the FESA, the Secretary of the Interior and the Secretary of Commerce have the joint authority to list a species as threatened or endangered (16 United States Code [U.S.C.] 1533c). The purposes of the FESA are to provide a means to conserve the ecosystems that endangered and threatened species depend on and to provide a program for conservation and recovery of the species with the intent of removing the species from a listed, protected status. Regulatory protection is given to any species listed as endangered or threatened.

The Service and the National Marine Fisheries Service (NMFS) are the federal agencies that enforce the FESA. Pursuant to the requirements of the FESA, an agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the proposed project will have an impact on such species. Under the FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed for listing under the FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 U.S.C. 1536).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union. Under the MBTA, it is unlawful to cause direct mortality to migratory birds, their nests, and nest contents. Nesting birds and the contents of nests within the construction area are therefore protected by the MBTA. The MBTA authorizes the Secretary of the Interior to issue permits for incidental take.

Section 404 of the Clean Water Act

The Corps has primary responsibility for administering regulations that concern waters of the U.S. under Section 404 of the CWA, which governs specified activities in other waters of the U.S. including wetlands. Section 404 regulates the discharge of dredged and fill material into waters of the U.S. The Corps requires that a permit be obtained if a project proposes placing structures within, over, or under navigable waters and/or discharging dredged or fill material into waters of the U.S. below the ordinary high-water mark in non-tidal waters.

Section 401 of the Clean Water Act

A water quality certification pursuant to Section 401 applies to projects and project applicants that have applied for a federal permit to conduct any activity including construction or operation of facilities, which may result in discharge into navigable waters. If the discharge occurs on lands over which the state exercises jurisdiction, the SWRCB, acting through the RWQCB, must certify that state water quality objectives will be met. If the discharge occurs on tribal lands, the EPA performs the Section 401 water quality certification.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of state-listed threatened and endangered species. Under the CESA, state agencies are required to consult with the CDFG when preparing CEQA documents. Under the CESA, the CDFG is responsible for maintaining a list of rare, threatened, and endangered species designated under state law (California Fish and Game Code 2070-2079). The CDFG also maintains lists of candidate species, species of special concern, and fully protected species. Candidate species are those taxa which have been formally recognized by the CDFG and are under review for addition to the state threatened and endangered list. Species of special concern are those taxa, which are considered sensitive and this list serves as a "watch list." Pursuant to the requirements of the CESA, agencies reviewing proposed projects within their jurisdictions must determine whether any state-listed species have the potential to occur within a proposed action area and if the proposed project would have any significant impacts upon such species. Project-related impacts to species on the CESA's rare, threatened, and endangered list would be considered significant and require mitigation. The CDFG can authorize take under Section 2080 if the proposed project demonstrates that the impacts are minimized and mitigated.

CEQA Guidelines Section 15380

Several federal and state statutes protect rare, threatened, and endangered species. The CEQA Guidelines Article 20, Section 15380 provides that a species not listed on the federal or state list of protected species may be considered rare, threatened, or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions of endangered, rare, or threatened provided in the FESA and the CESA. This section of the Guidelines provides public agencies with the ability to protect a species from any potential impacts of proposed projects until the respective government agency has the opportunity to designate (list) that species as protected, if warranted.

The California Native Plant Society (CNPS) maintains an extensive list of plant species that it considers to be rare, threatened, or endangered, but have no designated status or protection under federal or state endangered species legislation. Impacts to CNPS listed species (e.g., CNPS list 1B and 2) are considered pursuant during CEQA environmental review.

California Fish and Game Code, Sections 3503, 3503.5, 3511, and 3800

California Fish and Game Code Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. California Fish and Game Code Section 3511 list birds that are "fully protected", defined as those that may not be taken or possessed except under specific permit.

California Fish and Game Code Sections 1600-1616

Under Sections 1600-1616, the CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. It derives this jurisdiction under the CESA because the CDFG is responsible for the protection of fish or wildlife resources and their habitats (including wetlands). The CDFG provides comments on the Corps Section 404 and 401 permits under the Fish and Wildlife Coordination Act, last amended in 1995. The CDFG is authorized under the California Fish and Game Code Sections 1600-1616 to develop mitigation measures and enter into

Streambed Alteration Agreements with applicants whose proposed projects would obstruct the flow of, or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams and wetlands. Biological components of rivers, streams, or lakes may include aquatic and riparian vegetation, aquatic animals and fish, amphibians, reptiles, invertebrates, and terrestrial species that derive benefits from the stream system.

3.3.1 Affected Environment

This section provides an overview of the environmental setting and wetland features that occur within the proposed action area and evaluates if state and federally listed species would be affected by the Proposed Action. The proposed action area includes land located approximately 25 feet east and west of the proposed pipeline footprint. Potential effects to federally listed species are described in further detail in the Biological Assessment (Analytical Environmental Services [AES] 2011a).

Methodology

Information for the proposed action area was obtained from the following sources: color aerial photographs of the proposed action area and vicinity (Aerial Express 2007); Service National Wetlands Inventory (NWI) Map (Service 2010a) and the USGS National Hydrological Dataset (USGS 2000) for the Friant and Millerton Lake West quads; the *Custom Soils Resources Report* (National Resource Conservation Service [NRCS] 2008a); hydric soil information for the Friant and Millerton Lake West quads (NRCS 2008b); a Service list, dated April 29 2010, of federally listed special-status species with the potential to occur on or be affected by projects on the Friant and Millerton Lake West quads (Service 2010b); a CNPS list, dated March 30 2011, of special-status species known to occur on the Friant and Millerton Lake West quads; a California Natural Diversity Database (CNDDB) query, dated January 30 2011, of special-status species known to occur on the Friant and Millerton Lake West quads; and a CNDDB map (CDFG 2003) of special-status species known to occur within five miles of the proposed action area. The Service, CNPS, and CNDDB lists are included in **Appendix A**.

Biological and botanical surveys were conducted on August 4 and 7 2008, March 11 2010, and April 29 2010. The general biological surveys consisted of walking transects throughout the proposed action area and within 300 feet surrounding the proposed action area to evaluate biological communities and to document habitat for potentially occurring special-status species. The biological communities were classified using the Holland System (Holland 1986). A botanical inventory was conducted within the evident and identifiable blooming period for Hartweg's golden sunburst (*Psuedobahia bahiifolia*) on March 11 2010. A reference population in the proximity of the proposed action area was visited on the same day. Lists of plants and wildlife observed in the vicinity of the proposed action area during the August 4 and 7 2008, March 11 2010, and April 29 2010 biological surveys are included in **Appendix A**.

Biological Communities

Terrestrial vegetative communities in the proposed action area include nonnative annual grassland, blue oak woodland, and ruderal/developed areas. Aquatic vegetative communities in the proposed action area include Millerton Lake. Dominant vegetation observed in each

biological community is discussed below. A map indicating the habitat types within the proposed action area is provided in **Figure 5**. Photographs of the habitat types are illustrated in **Figure 6**.

Terrestrial Habitats

Nonnative annual grassland occurs within the southern segment of the proposed action area. Dominant vegetation observed in the nonnative annual grassland includes: ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Eastwood's fiddleneck (*Amsinckia eastwoodiae*), rusty popcorn flower (*Plagiobothrys nothofulvus*), oat (*Avena* sp.), and long-beaked storksbill (*Erodium botrys*). Mammal burrows were observed within the nonnative annual grassland. Blue oak woodland occurs within the northern segment of the proposed action area adjacent to Winchell Cove Road developed areas. Dominant overstory vegetation observed in the blue oak woodland includes: blue oak (*Quercus douglasii*) and foothill pine (*Pinus sabiniana*). Dominant understory vegetation observed in this community includes: rusty popcorn flower, Eastwood's fiddleneck, ripgut grass, and soft chess.

Ruderal/disturbed areas occur throughout the proposed action area. These areas include Winchell Cove Road, the road shoulder, the Millerton Lake Marina parking lot, and kiosks.

Millerton Lake occurs within the northern portion of the proposed action area. The portion of Millerton Lake within the proposed action area lacks vegetation along the edge of the shoreline.

Waters of the U.S.

An informal wetland delineation was conducted within the proposed action area. The NWI (Service 2010a) map documents two wetland types within the portion of Millerton Lake that occurs within the proposed action area: Lacustrine Limnetic Unconsolidated Bottom Diked/Impounded (L1UBHh-Lake) and Lacustrine Littoral Unconsolidated Bottom Diked/Impounded (L2UBHh-Lake). The portion of Millerton Lake within the proposed action area is considered a jurisdictional feature. No additional potential wetlands or water features were identified within the proposed action area on the NWI map or during the field investigations.

Special-Status Species

A table in **Appendix A** provides a summary of regionally occurring special-status species based on the Service file data and CNPS and CNDDB queries. The table provides a rationale as to whether each species has the potential to occur within the proposed action area based on the presence of each species or its habitat observed during the biological surveys. Special-status species that do not have the potential to occur within the proposed action area are not discussed further. **Figure 7** provides a CNDDB map of known occurrences of special-status species documented within five miles of the proposed action area. Special-status species with the potential to occur within the proposed action area are described in detail below.

Succulent Owl's-Clover (*Castilleja campestris* ssp. *succulenta*)
Federal Status – Threatened, Critical Habitat
State Status – Endangered
Other – 1B

SOURCE: Aerial Express aerial photograph, 6/15/2007 AES, 2010

Figure 5
Habitat Map

PHOTO 1: View north of the project site along Winchell Cove Road. Photograph taken on March 11, 2010.

PHOTO 2: View south of nonnative grassland adjacent to project site (Winchell Cove Road). Photograph taken on November 7, 2008.

PHOTO 3: View to the east of project site east of Winchell Cove Road and north of Millerton Road. Photograph taken on August 14, 2008.

PHOTO 4: View northwest of Millerton Lake in project vicinity. Photograph taken on March 11, 2010.

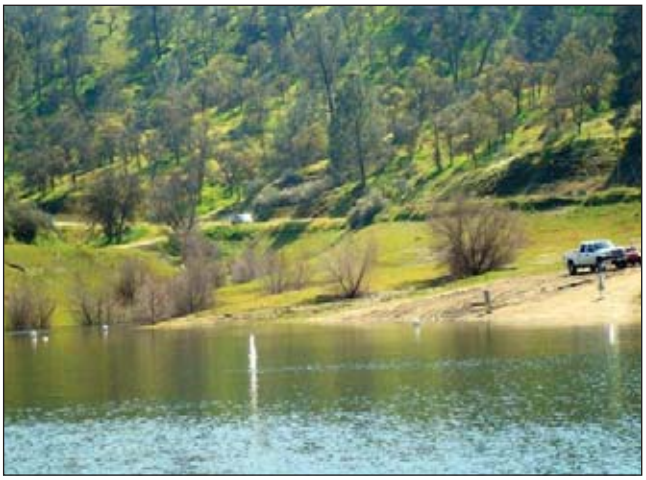


PHOTO 5: View southwest of proposed pipeline alignment along Winchell Cove Road. Blue oak, and ruderal disturbed areas adjacent to the project site also shown. Photograph taken on March 11, 2010.

PHOTO 6: View to northwest of Millerton Lake shoreline from the northern portion to the project site. Photograph taken on March 11, 2010.

SOURCE: AES, 2010

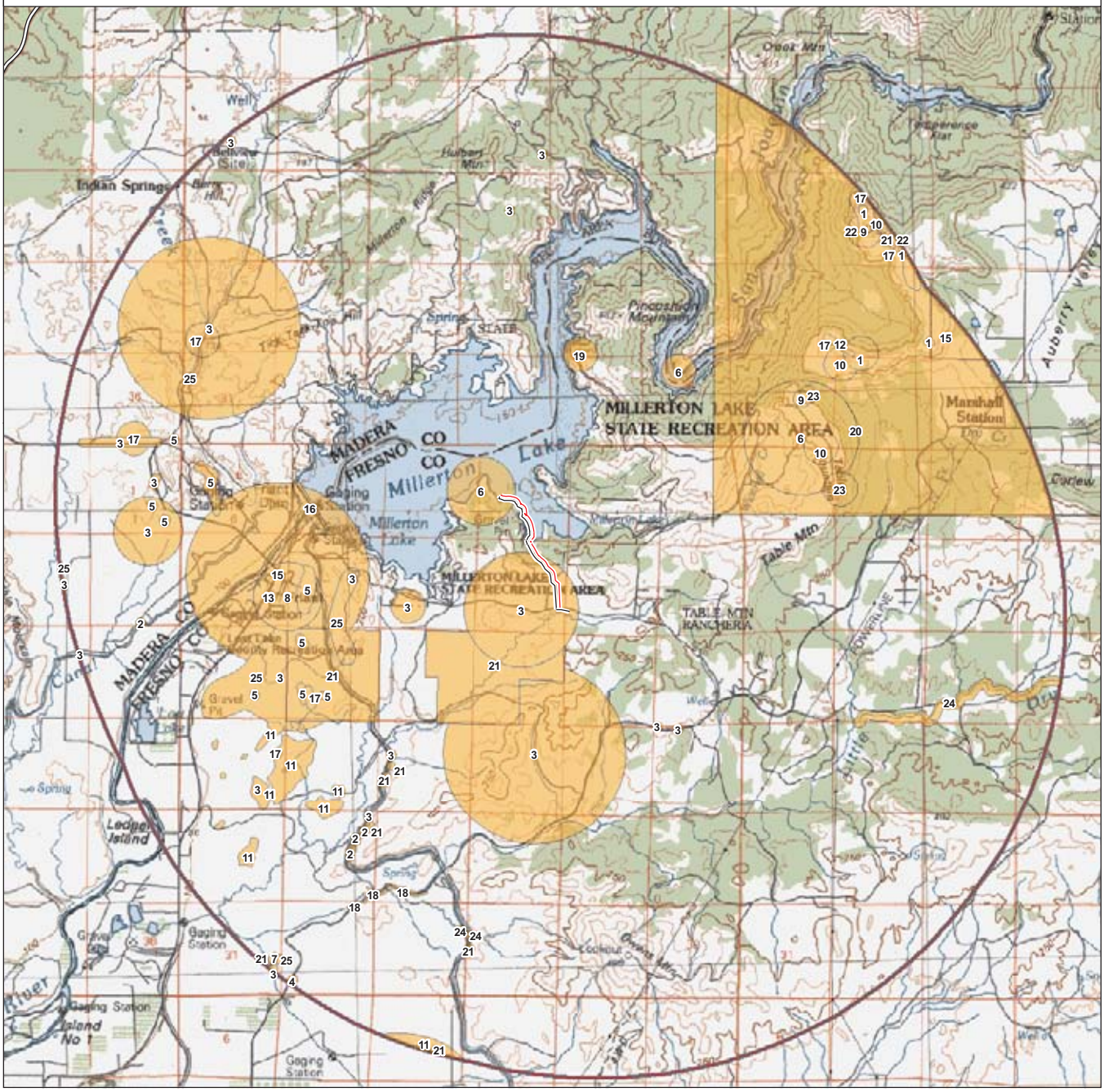
Figure 6
Site Photographs

SPECIAL STATUS SPECIES DATA

Existing Water Main
Proposed Water Main
5-Mile Radius
CNDDB Occurrences

1 - Boggs Lake hedge-hyssop
2 - California linderiella
3 - California tiger salamander
4 - dwarf downingia
5 - Hartweg's golden sunburst
6 - Madera leptosiphon
7 - midvalley fairy shrimp
8 - moestan blister beetle
9 - molestan blister beetle
10 - Northern Basalt Flow Vernal Pool
11 - Northern Hardpan Vernal Pool
12 - prairie falcon
13 - San Joaquin kit fox
14 - San Joaquin Valley Orcutt grass
15 - spiny-sepaled button-celery
16 - spotted bat
17 - succulent owl's-clover
18 - Sycamore Alluvial Woodland
19 - Table Mountain harvestman
20 - valley elderberry longhorn beetle
21 - vernal pool fairy shrimp
22 - vernal pool tadpole shrimp
23 - western mastiff bat
24 - western pond turtle
25 - western spadefoot

NORTH
Feet
0 4,500 9,000



SOURCE: "Shaver Lake, CA" & "Fresno, CA" USGS 100k Topographic Quadrangles, Mt. Diablo Baseline and Meridian; California Natural Diversity Database, 2/2010; AES, 2010

Figure 7
CNDDB 5-Mile Radius Map

Succulent owl's clover is an annual herb found in vernal pools, which are often acidic, from 50 to 750 meters. The blooming period for this species is from April to May (CNPS 2011), which includes bright yellow to white flowers. Major threats to succulent owl's clover are agriculture, flood control projects, overgrazing, and trampling (Service 1997).

Succulent owl's clover occurs sporadically in the San Joaquin Valley over a range of 66 miles, extending through northern Fresno, western Madera, eastern Merced, southeastern San Joaquin, western Mariposa, and Stanislaus counties (Service 1997, CDFG 2003). There are 88 occurrences recorded for this species in the CNDDB. Several populations in Merced and Fresno counties have not been observed for years and are possibly extirpated. Several populations in Merced and Fresno counties have not been observed for years and are possibly extirpated (CDFG 2003). There are 12 CNDDB occurrences for this species within five miles of the proposed action area. The nearest CNDDB record (CNDDB occurrence number: 17) is from 1992 is approximately three miles southwest of the project footprint. The record states that 60 plants were observed within vernal pools on sandy to clay loam soils within valley grasslands.

The Service list identifies critical habitat for succulent owl's-clover on the Friant and Millerton Lake East quads. The proposed action area does not occur within critical habitat for this species.

No vernal pools occur in or within 300 feet of the proposed action area. There is one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area. The seasonal wetland was formed as a result of a leaky water tank. The proposed action would not affect the hydrology or hardpan of this wetland. No succulent owl's clover or vernal pool plants were observed within the seasonal wetland during a year of vernal pool branchiopod surveys conducted within this seasonal wetland for the Millerton Road Widening project (AES 2009). This species does not occur within or in the vicinity of the proposed action area.

Dwarf Downingia (*Downingia pusilla*)
Federal Status – None
State Status – None
Other – CNPS 2

Dwarf downingia is an annual herb found in Valley and foothill grassland and vernal pools from 0 to 450 meters. Blooming period is from March through May (CNPS 2011). There are no CNDDB records for dwarf downingia within five miles of the proposed action area.

No vernal pools occur in or within 300 feet of the proposed action area. The one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area did not contain dwarf downingia or other vernal pool plants during the 2009 vernal pool branchiopod surveys (AES 2009). The nonnative annual grassland within the proposed action area provides potential habitat for dwarf downingia. The March 11 and April 29 2010 botanical inventories were conducted within the evident and identifiable blooming period for this species. Dwarf downingia was not observed in or within 300 feet of the proposed action area. This species does not occur in or within 300 feet of the proposed action area.

Spiny-Sepaled Button-Celery (*Eryngium spinosepalum*)
Federal Status – None
State Status – None
Other – CNPS 1B

Spiny-sepaled button-celery is an annual to perennial herb found in Valley and foothill grasslands and vernal pool habitats from 80 to 255 meters. Blooming period is from April through May (CNPS 2011). There are two CNDDB records for spiny-sepaled button-celery within five miles of the proposed action area. The nearest record is from 1928 and is approximately 2.8 miles west of the proposed action area on the Millerton Lake East quad (CNDDB occurrence number: 31). The only information provided is that the occurrence was observed in beds of former winter pools and that fieldwork is needed.

No vernal pools occur in or within 300 feet of the proposed action area. The one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area did not contain spiny-sepaled button-celery or other vernal pool plants during the 2009 vernal pool branchiopod surveys (AES 2009). The nonnative annual grassland within the proposed action area provides potential habitat for spiny-sepaled button-celery. The April 29 2010 botanical inventory was conducted within the evident and identifiable blooming period for this species. Spiny-sepaled button-celery was not observed in or within 300 feet of the proposed action area. This species does not occur in the proposed action area.

Madera Leptosiphon (*Leptosiphon serrulatus*)
Federal Status – None
State Status – None
Other – CNPS 1B

Madera leptosiphon is an annual herb found in cismontane woodland and lower montaine coniferous forest from 300 to 1,300 meters. Blooming period is from April through May (CNPS 2011). There are three CNDDB records for Madera leptosiphon within five miles of the proposed action area. The nearest record is from 1967 and overlaps the northern portion of the proposed action area on the Millerton Lake West quad (CNDDB occurrence number: 9). The only information provided is that it was found two miles north of the boat ramps on the east side of the south bay of Millerton Lake in a foothill woodland and that fieldwork is needed.

The blue oak woodland within the proposed action area provides potential habitat for Madera leptosiphon. The April 29 2010 botanical inventory was conducted within the evident and identifiable blooming period for this species. Madera leptosiphon was not observed in the proposed action area. This species does not occur in the proposed action area.

San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)
Federal Status –Threatened, Critical Habitat
State Status – Endangered
Other – CNPS 1B

San Joaquin Valley Orcutt grass is small, tufted, semi-aquatic annual plant endemic to vernal pools. San Joaquin Valley Orcutt grass is found on alluvial fans, tabletop lava flows (Stebbins et al. 1995) and both low and high stream terraces (Stone et al. 1988). The species occurs within rolling grasslands (Crampton 1959) in northern claypan, northern hardpan, and northern basalt flow vernal pools (Sawyer and Keeler-Wolf 1995).

Ocuttia species germinate underwater in January and February (Griggs and Jain 1983; Keeley 1998). In order to germinate, the seeds have to be colonized by aquatic fungi (Griggs 1981; Keeley 1988). The plants grow underwater for three or more months (Keeley 1998). Peak flower production generally occurs in June and July and can extend into August and September in rainy years (Griggs 1981). Late-spring inundation can kill flowering plants (Silveira 1997). Beginning in the mid-1800s, much vernal pool habitat was lost to land conversion for agriculture and for water storage and conveyance facilities (Frayer et al. 1989; Kreissman 1991). By 1997, it is estimated that three quarters of these habitats were lost in the Central Valley (Holland 1998). Urban development and associated activities, such as off-road activity threaten the species through loss, fragmentation, and degradation of habitat, alteration of hydrology, and contaminants.

San Joaquin Valley Orcutt grass has been found from 30 to 755 meters, with the highest elevations on tabletops in Madera and Fresno counties (Stebbins et al. 1995). The species has never occurred outside of the Southern Sierra Foothills Vernal Pool Region (Keeler-Wolf et al. 1998). San Joaquin Valley Orcutt grass was known from Tulare, Fresno, Madera, Merced and Stanislaus counties (Hoover 1941). By the late seventies, none of these occurrences remained (Griggs and Jain 1983). In the 1980s, several new observations were made, mostly in Merced County, but there were three in Madera County and one in Fresno County (Stone et al. 1988). Since 1990, six more observations were made, including one in Tulare County (Witham 2000). It is believed that the historic occurrences within the Ivanhoe and Wahtoke quadrangles have been extirpated. There one CNDDB occurrence for this species within five miles of the proposed action area. The CNDDB record (CNDDB occurrence number: 47) is from 1997 is approximately 4.8 miles northeast of the proposed action area. The record states that over 5,000 plants were observed within two vernal pools surrounded by grassland.

The Service list identifies critical habitat for San Joaquin orcutt grass on the Friant and Millerton Lake East quads. The proposed action area does not occur within critical habitat for this species.

No vernal pools occur in or within 300 feet of the proposed action area. The one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area did not contain San Joaquin orcutt grass or other vernal pool plants during the 2009 vernal pool branchiopod surveys (AES 2009). The August 4 and 7 2008 biological surveys were conducted within the evident and identifiable blooming period for this species. This species was not observed within 300 feet of the proposed action area. This species does not occur within or within 300 feet of the proposed action area.

Hartweg's Golden Sunburst (*Pseudobahia bahiifolia*)
Federal Status – Endangered
State Status – Endangered

Other – CNPS List 1B

Hartweg's golden sunburst is an annual herb found on clay, which is often acidic, in cismontane woodland and Valley and foothill grassland from 15 to 150 meters. Blooming period occurs from March through April (CNPS 2011). There are nine CNDDB records for Hartweg's golden sunburst within five miles of the proposed action area. The nearest record is from 2001 and is approximately 3.4 miles southwest of the proposed action area on the Friant quad (CNDDB occurrence number: 21). The record states that an unknown number of plants were observed on the tops of rolling low hills in Valley grassland and vernal pools on Rocklin loam soil.

The blue oak woodland and nonnative annual grassland within the proposed action area provide potential habitat for Hartweg's golden sunburst. Several Hartweg's golden sunburst were observed in bloom at a reference population (CNDDB occurrence number: 21) on a disturbed hillslope approximately 3.4 miles southwest of the proposed action area on March 11 2010. The March 11 and April 29 2010 biological surveys were conducted within the evident and identifiable blooming period for Hartweg's golden sunburst. A member in the same family, California goldfields (*Lasthenia californica*) was observed, however, Hartweg's golden sunburst was not observed in the proposed action area. This species does not occur in the proposed action area.

California Tiger Salamander (*Ambystoma californiense*; CTS), Central Population
Federal Status – Threatened, Critical Habitat
State Status – Threatened

CTS require suitable aquatic habitat for breeding and upland habitat for aestivation. Aquatic breeding habitat includes vernal pools and seasonal and perennial ponds in grassland and oak savannah plant communities from sea level to approximately 1,169 meters. Aquatic breeding ponds are almost always found in grassland (CaliforniaHerps 2008). CTS breeding ponds have rarely been observed in grasslands with scattered oak trees or in scrub or chaparral habitats. CTS spend most of their lives in upland habitats that consist of grassland and oak savannah with burrows of small mammals. CTS have been observed up to 1.3 miles from breeding ponds, though this is a greater distance than is typical. CTS remain in their upland burrows through the dry summer and fall months. Adults emerge from their burrows on rainy nights to feed and migrate to breeding ponds once fall or winter rains begin. Adults migrate back to upland burrows from one to eight weeks (Stebbins 2003). Metamorphosed juveniles leave the breeding sites in late spring or early summer. Adults may continue to come out nightly to feed for approximately two weeks after returning to burrows. Overland movements occur during the night throughout the juvenile and adult phases. There are 11 CNDDB records for CTS within five miles of the proposed action area. The nearest record is from 1973 and is mapped as a polygon on the south side of the proposed action area on the Friant quad (CNDDB occurrence number: 76). The only information states that the record was mapped in an imprecise location in the Millerton Lake State Recreation Area. No CNDDB records have specified that CTS is documented to occur on the north side of Millerton Road (CDFG 2003).

The Service designated critical habitat for the Central Population of CTS on August 23 2005 (50 CFR 17) (Service 2005a). The Service divided the current range of the Central California

population into four geographic regions: Central Valley, Southern San Joaquin Valley, East Bay, and Central Coast.

The Central California Distinct Population Segment (DPS) of CTS has the following primary constituent elements (PCEs): (1) Standing bodies of fresh water, including natural and man-made (*e.g.*, stock) ponds, vernal pools, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a sufficient length of time necessary for the species to complete the aquatic portion of its life cycle. (2) Barrier-free upland habitats adjacent to breeding ponds that contain small mammal burrows, including but not limited to burrows created by the California ground squirrel and valley pocket gopher. Small mammals are essential in creating the underground habitat that adult CTS depend upon for food, shelter, and protection from the elements and predation. (3) Upland areas between occupied locations (PCE 1) and areas with small mammal burrows (PCE 2) that allow for dispersal among such sites. (4) The geographic, topographic, and edaphic features that support aggregations or systems of hydrologically interconnected pools, swales, and other ephemeral wetlands and depressions within a matrix of surrounding uplands, which together form hydrologically and ecologically functional units called vernal pool complexes. These features contribute to the filling and drying of the vernal pool, maintain suitable periods of pool inundation for larval salamanders and their food sources, and provide breeding, feeding, and sheltering habitat for juvenile and adult CTS and small mammals that create burrow systems essential for CTS aestivation (Service 2005a).

Approximately 1.14 acres of the proposed action area occurs within designated critical habitat Unit 2 (Southern San Joaquin Region) for CTS (**Figure 8**) (Service 2005a). A total of 4,960.5 acres was designated as critical habitat Unit 2 for CTS in Fresno County.

The proposed action area does not provide breeding habitat for this species. Mammal burrows were observed in the nonnative annual grassland during the biological surveys conducted within the nonnative annual grassland that provide potential upland habitat for CTS. This species was not observed during the biological surveys conducted within the proposed action area. CTS is assumed to be present in the nonnative annual grassland on the south side of the proposed action area.

Conservancy Fairy Shrimp (*Branchinecta conservatio*)
Federal Status – Endangered, Critical Habitat
State Status – None

Conservancy fairy shrimp inhabit rather large, cool-water vernal pools with moderately turbid water (Eriksen and Belk 1999). The pools generally last until June, however, the Conservancy fairy shrimp are gone long before then. They have been collected from early November to early April. Female Conservancy fairy shrimp carry their eggs in a ventral brood sac. The eggs are either dropped to the pool bottom or remain in the brood sac until the mother dies and sinks to the bottom. When the pool dries out, so do the eggs. They remain in the dry pool bed until rains and other environmental stimuli hatch them.

SOURCE: U.S. Fish and Willdlife Service, Critical Habitats for Fresno County, 2/2006; Provost & Pritchard Engineering Group, 2007; Espinosa Surveying, 2009; Aerial Express aerial photography, 6/2007; AES, 2010

Figure 8
Critical Habitat Map

Resting fairy shrimp eggs are known as cysts. They are capable of withstanding heat, cold, and prolonged desiccation. When the pools refill, some, but not all, of the cysts may hatch. The cyst bank in the soil may contain cysts from several years of breeding. Hatching can begin within the same week that a pool starts to fill. Average time to maturity is 49 days. In warmer pools, it can be as little as 19 days (Eriksen and Belk 1999).

Holland (1978) estimated that between 60 and 85 percent of the habitat that once supported vernal pools had been destroyed by 1973. Since 1973, a substantial amount of remaining habitat has been converted for human uses. The rate of loss of vernal pool habitat in the state has been estimated at two to three percent per year (Holland and Jain 1988).

The historical distribution of the Conservancy fairy shrimp is not known. However, the distribution of vernal pool habitats in the areas where the species is now known to occur were once more continuous and larger in area than they are today. It is likely the Conservancy fairy shrimp once occupied suitable vernal pool habitats throughout a large portion of the Central Valley and southern coastal regions of California. It may still exist in unsurveyed pools within this region.

The species is currently known from several disjunct populations: the Vina Plains in Tehama County, south of Chico in Butte County, the Jepson Prairie Preserve and surrounding area in Solano County, Sacramento National Wildlife Refuge in Glenn County, Mapes Ranch west of Modesto, San Luis National Wildlife Refuge and the Haystack Mountain/Yosemite Lake area in Merced County, and two locations on the Los Padres National Forest in Ventura County.

The proposed action area does not provide habitat for this species. No vernal pools occur in or within 300 feet of the proposed action area. The one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area did not contain Conservancy fairy shrimp, other vernal pool branchiopods, or vernal pool plants during the 2009 vernal pool branchiopod surveys (AES 2009). This species does not occur in or within 300 feet of the proposed action area.

Vernal Pool Fairy Shrimp (*Branchinecta lynchi*; VPFS)
Federal Status – Threatened, Critical Habitat
State Status – None

VPFS inhabit vernal pools of the Central Valley and Coast Ranges from 10 to 290 meters. VPFS are found most commonly in small swales, earth slumps, or basalt-flow depression basins with grassy or muddy bottoms in unplowed soils, and occasionally in clear depressions less than one meter in diameter in sandstone outcrops surrounded by foothill grasslands. VPFS occur in waters between 4.5 and 23°C, with low to moderate total dissolved solids (48 to 481 parts per million (ppm)), and a pH between 6.3 and 8.5 (Syrdahl 1993; Eriksen and Belk 1999). When the vernal pools fill with rainwater, VPFS hatch from eggs (shell-covered dormant embryos) present in the soil from previous years of breeding. Eggs normally hatch when water less than 10°C fills vernal pools. VPFS reach maturity in approximately 18 days under conditions when daytime temperatures reach 20°C, but 41 days are more typical if water remains near 15°C (Gallagher 1996; Helm 1998). VPFS are known from Alameda, Butte, Contra Costa, 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 counties in California and in southern Oregon (Eriksen and Belk 1999).

The Service designated critical habitat for VPFS and 14 other vernal pool species on August 11 2005 (70 FR 46924) (Service 2006).

The PCEs of critical habitat for the VPFS are the habitat components that provide: (i) Topographic features characterized by mounds and swales, and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools described in PCE (ii), providing for dispersal and promoting hydroperiods of adequate length in the pools. (ii) Depressional features including isolated vernal pools with underlying restrictive soil layers that become inundated during winter rains and that continuously hold water for a minimum of 18 days, in all but the driest years; thereby providing adequate water for incubation, maturation, and reproduction. As these features are inundated on a seasonal basis, they do not promote the development of obligate wetland vegetation habitats typical of permanently flooded emergent wetlands. (iii) Sources of food, expected to be detritus occurring in the pools, contributed by overland flow from the pools' watershed, or the results of biological processes within the pools themselves, such as single-celled bacteria, algae, and dead organic matter, to provide for feeding. (iv) Structure within the pools described in PCE (ii), consisting of organic and inorganic materials, such as living and dead plants from plant species adapted to seasonally inundated environments, rocks, and other inorganic debris that may be washed, blown, or otherwise transported into the pools, that provide shelter (Service 2006).

The proposed action area is within the Southern Sierra Foothills Vernal Pool Region within the Fresno core area of the Recovery Plan (Service 2005b). Approximately 0.70 acres of the action area occurs within designated critical habitat Unit 2 for VPFS within the Northeast Fresno-Southern San Joaquin Valley Geographic Region (**Figure 8**). Critical habitat Unit 2 comprises a total of 3,919.3 acres.

No vernal pools occur in or within 300 feet of the proposed action area. The one seasonal wetland that occurs approximately 150 feet west of the southern portion of the proposed action area did not contain VPFS, other vernal pool branchiopods, or vernal pool plants during the 2009 vernal pool branchiopod surveys (AES 2009). Although this species does not occur in or within 300 feet of the proposed action area, the proposed action area occurs within designated critical habitat.

Western Spadefoot Toad (*Spea [=Scaphiopus] hammondii*; WST)
Federal Status – None
State Status – Species of Concern

WST inhabits washes, floodplains of rivers, alluvial fans, playas, and alkali flats within Valley and foothill grasslands, open chaparral, and pine-oak woodlands. WST prefers areas of short grasses where the soil is sandy or gravelly. WST is almost completely terrestrial, entering water

only to breed. WST breeds in temporary pools, such as vernal pools, or pools in ephemeral waterways from January to May. In order for young to successfully metamorphose, breeding pools must lack exotic predators, such as fish, bullfrogs, and crayfish (CDFG 2003; Stebbins 2003). WST excavate burrows or inhabit burrows previously excavated by other mammals to aestivate for up to nine months at a time (Jennings and Hayes 1994). There are four CNDDB records for WST within five miles of the proposed action area. The nearest record is from 1994 and is approximately 1.4 miles south of the proposed action area on the Friant quad (CNDDB occurrence number: 118). The record states that spadefoot tadpoles were observed in two vernal pools.

The burrows within the nonnative annual grassland provides potential aestivation habitat for WST. This species was not observed during the biological surveys conducted within the proposed action area. This species has the potential to occur within the proposed action area.

Swainson's Hawk (*Buteo swainsoni*)
Federal Status – None
State Status – Threatened

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 (CDFG 2003). Breeding pairs immediately construct nests, eggs are laid from mid- to late-April, and are incubated into mid-May when young begin to hatch. Young remain near the nest and depend on the adults for approximately four weeks after fledging until they permanently leave the breeding territory. Nesting occurs from March 1 to August 15. Typical foraging habitat includes annual grassland, alfalfa, and other dry farm crops that provide suitable habitat for small mammals. Suitable foraging habitat nearby nesting sites is critical for fledgling success (Polite 1988-1990). There are no CNDDB records for Swainson's hawk within five miles of the proposed action area. There is one record for Swainson's hawk within ten miles of the proposed action area. The record is from 1994 (CNDDB occurrence number: 51) and is approximately 8.26 miles northwest of the proposed action area on the Little Table Mountain quad. The record states that two adults and two fledglings were observed in 1979, however, no Swainson's hawk or nests were observed during a follow-up survey conducted in 1994.

The CDFG considers whether a proposed project will adversely affect at least five acres of suitable foraging habitat within a ten-mile radius of a Swainson's hawk nest that has been active within the last five years. Suitable Swainson's hawk foraging habitat includes alfalfa, fallow fields, beet, tomato, and other low-growing row or field crops, dry-land and irrigated pasture, rice land (when not flooded), and cereal grain crops (including corn after harvest) (CDFG 1994).

The trees within the blue oak woodland in the vicinity of the proposed action area provide nesting habitat for this species. The proposed action area provides foraging habitat within the nonnative annual grassland. Swainson's hawks were not observed during the biological surveys within the proposed action area. However, the proposed action area appears to be outside of the known geographical range for Swainson's hawk because there has only been one documented

CNDDB record within ten miles of the proposed action area and the record was documented at least 14 years ago (but the actual Swainson's hawk sighting occurred over 30 years ago). This species has a low potential to nest and forage within the proposed action area.

Pallid Bat (*Antrozous pallidus*)
Federal – None
State – Species of Concern

Pallid bats are found in grasslands, shrublands, woodlands, and forests from sea level up to mixed conifer forests through 2,000 meters. The species commonly occurs in open, dry habitats with rocky areas for roosting. Other roosts include cliffs, abandoned buildings, bird boxes, and under bridges. Pallid bats are most active during the dawn and dusk hours and forage over open ground. This species establishes daytime roosts in caves, crevices, mines, large hollow trees, and unoccupied buildings. Pallid bats mate from October through February and most young are born from April through July (Harris 2000). There are no CNDDB records for Pallid bat within five miles of the proposed action area.

The trees within the blue oak woodland provide roosting sites for this species. The proposed action area provides foraging habitat within the nonnative annual grassland. Pallid bats were not observed during the biological surveys within the proposed action area. This species has the potential to roost and forage within the proposed action area.

Spotted Bat (*Euderma maculatum*)
Federal Status – None
State Status – Species of Special Concern
Other – None

Spotted bats are found in foothills, mountains, and desert regions with vegetation types ranging from desert to sub-alpine meadows including desert scrub, pinyon juniper woodland, ponderosa pine, mixed conifer forest, canyon bottoms, rims of cliffs, riparian areas, fields, and open grassland from sea level to 300 meters. Spotted bats may make local movements in some areas, from high elevations in summer to lower elevations in autumn. Spotted bats may be yearlong residents, or migratory, although little is known about the California populations. Spotted bats are known throughout California except for the high Sierra Nevada from Shasta to Kern counties and the northwestern corner of California from Del Norte and western Siskiyou counties to northern Mendocino County (Harris 2000).

There is one CNDDB record for spotted bat within five miles of the proposed action area. The record is from 1970 and is approximately 3.3 miles west of the proposed action area on the Millerton Lake West quad (CNDDB occurrence number: 40). The record states that a bat was collected at a CDFG fish hatchery at Friant Dam.

The trees within the blue oak woodland provide roosting sites for this species. The proposed action area provides foraging habitat within the nonnative annual grassland. Spotted bats were not observed during the biological surveys within the proposed action area. This species has the potential to roost and forage within the proposed action area.

American Badger (*Taxidea taxus*)
Federal Status – None
State Status – Species of Concern

American badgers are found in dry, open habitats including grassland and open woodland. Suitable burrowing habitat requires dry, often sandy soil. Breeding occurs in summer and early fall, with young being born from March to April (CDFG 2005). American badgers are known throughout California, except in the northern North Coast (Ahlborn 2005). There are no CNDDB records for the American badger within five miles of the proposed action area.

The nonnative annual grassland provides habitat for this species. This species was not observed during the biological surveys within the proposed action area. This species has the potential to occur within the proposed action area.

San Joaquin Kit Fox (*Vulpes macrotis mutica*; SJKF)
Federal Status – Endangered
State Status – Threatened

SJKF primarily inhabit grassland and scrubland communities. SJKF also inhabit oak woodland, alkali sink scrubland, and vernal pool and alkali meadow communities. Foraging habitat includes grassland, woodland, and open scrub. Denning habitat includes an open, flat area with loose, generally sandy or loamy soils (Brown et al. 2006). There is one CNDDB record for SJKF within five miles of the proposed action area. The record is from the early 1990s and is approximately 3.3 miles west of the proposed action area on the Friant quad (occurrence number: 1113). The record states that one SJKF was sighted.

The Early Evaluation Requirements (Requirements) was conducted in the vicinity of the proposed action area in accordance with the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance* (2011) (SJKF Survey Protocol) (2011). The results of the SJKF Survey Protocol are documented within the Biological Assessment (AES 2011a). No SJKF were observed during the biological surveys of the proposed action area. The proposed action area does not provide denning habitat for SJKF. The proposed action area contains only marginal foraging habitat as only one CNDDB occurrence documented over 17 years ago has been recorded within a five-mile radius of the proposed action area. Several barriers, including the San Joaquin River, Millerton Lake, the Friant-Kern Canal, Auberry Road, and Friant Road, inhibit the continuity of surrounding vegetative communities, and therefore reduce the likelihood that SJKF would forage within the proposed action area.

Migratory Birds and Birds of Prey
Migratory birds and other birds of prey, protected under 50 CFR 10 of the MBTA, and those protected under Sections 3503, 3503.5, 3511, and 3800 of the California Fish and Game Code, have the potential to nest in the trees within the blue oak woodland in the vicinity of the proposed action area. No birds were observed nesting within the proposed action area during the

biological surveys. Migratory birds and other birds of prey have the potential to nest within the proposed action area.

3.3.2 Environmental Consequences

3.3.2.1 No Action

Under the No Action Alternative, construction activities associated with pipeline construction would not occur; therefore, potential short-term impacts to biological resources would not occur. Should the system fail, a separate environmental review would occur; any potential impacts to biological resources would be identified at that time.

3.3.2.2 Proposed Action

Special-Status Species

Special-Status Plant Species

No potentially occurring special-status plants occur within the proposed action area. The Proposed Actions would have no impact on these species because they do not occur within the proposed action area. No mitigation is required.

California Tiger Salamander

The study area does not provide breeding habitat for CTS. The Proposed Actions would have no effect on CTS breeding habitat because none exists within the project site. Approximately 0.17 acres of upland habitat within the nonnative annual grassland would be temporarily disturbed due to trenching activities associated with the installation of the proposed pipeline. The proposed actions may affect and are likely to adversely affect CTS. To compensate for take of CTS, before construction activities within the nonnative annual grassland areas of the project site, three preservation credits will be obtained from a Service-approved conservation bank for every acre of upland habitat temporarily impacted. The expansion of permanent habitat at a three-to-one ratio for CTS via the purchase of preservation credits would off-set the temporary loss of micro-habitat within the action area. Therefore, the preservation of 0.51 acres of suitable habitat would compensate for any potential adverse effects to this species.

Approximately 1.14 acres of the action area lies within designated critical habitat Unit 2 (Southern San Joaquin Region) for CTS. Critical habitat Unit 2 comprises a total of 4,960.5 acres. The proposed project would temporarily disturb 0.023 percent of critical habitat Unit 2. The proposed project would not result in a change in land use as project components would be located underground, and all surfaces would be restored to existing conditions after construction is completed. Therefore, critical habitat Unit 2 would not be permanently modified by the proposed actions. The Proposed Actions would not adversely affect critical habitat for CTS. The majority of construction activities associated with the Proposed Actions would extend through paved road right-of-ways. However, temporary construction activities associated with the proposed actions that extend through non-native grassland would adversely affect 0.17 acres of critical habitat for CTS. Before construction activities within the within the nonnative annual grassland areas of the project, three preservation credits will be obtained from a Service-approved conservation bank for every acre of upland habitat temporarily impacted. The expansion of permanent habitat at a three-to-one ratio for CTS via the purchase of preservation credits would off-set the temporary adverse effects to critical habitat within the action area.

Vernal Pool Fairy Shrimp

The Proposed Actions would have no effect on VPFS because no vernal pool habitat exists in the vicinity of the proposed action area.

Approximately 0.70 acres of the proposed action area lies within designated critical habitat Unit 2 (Northeast Fresno-Southern San Joaquin Valley Geographic Region) for VPFS. Critical habitat Unit 2 comprises a total of 3,919.3 acres. The proposed project would temporarily disturb 0.018 percent of Critical habitat Unit 2. The proposed project would not result in a change in land use as project components would be located underground, and all surfaces would be restored to existing conditions after construction is completed. Additionally, the project area does not containg any PCEs for VPFS habitat as there are no vernal pools located within 300 feet of the proposed pipeline alignment. Therefore, critical habitat Unit 2 would not be permanently modified by the Proposed Actions. The Proposed Actions would not adversely modify or remove critical habitat for VPFS. No mitigation is required.

Western Spadefoot Toad

The proposed action area does not provide breeding habitat for WST. The Proposed Actions would have no effect on WST breeding habitat because none exists within the proposed action area. Approximately 0.17 acres of upland habitat within the nonnative annual grassland would be temporarily disturbed due to trenching activities associated with the installation of the proposed pipeline. Recommended mitigation measures would minimize the potential for individuals to be harmed during construction activities.

Swainson's Hawk

Although no trees are proposed for removal, construction activities could potentially result in disturbance of potential Swainson's hawk nest sites within the blue oak woodland through temporary increases in ambient noise levels and increased human activity within the proposed action area. Potential disruption of nesting Swainson's hawk during construction of the Proposed Actions could result in the abandonment of active nests. Recommended mitigation measures would minimize the potential for disruption of Swainson's hawks through identification and avoidance of active nests. These measures comply with the *State Fish and Game Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley of California* (CDFG 1994) as they relate to the Proposed Actions.

The Proposed Actions have the potential to temporarily affect Swainson's hawk foraging habitat through trenching activities within the nonnative annual grassland. Approximately 0.17 acres of foraging habitat would be temporarily impacted by the Proposed Actions. The CDFG considers loss of greater than five acres of foraging habitat to be significant. The Proposed Actions would not result in a change in land use as project components would be located underground, and all surfaces would be restored to existing conditions after construction is completed. No mitigation is required.

Pallid Bat and Spotted Bat

Construction activities would result in disturbance of potential roost sites for pallid bat and spotted bat within the blue oak woodland through temporary increases in ambient noise levels

and increased human activity within the proposed action area. Recommended mitigation measures would minimize the potential for individuals to be harmed during construction activities.

American Badger

The Proposed Actions have the potential to affect American badger through trenching activities by temporarily disturbing upland habitat within the nonnative annual grassland. Recommended mitigation measures would minimize the potential for individuals to be harmed during construction activities.

San Joaquin Kit Fox

Although unlikely, SJKF has the potential to forage within the blue oak woodland and nonnative annual grassland in the vicinity of the proposed action area. The proposed action area does not provide denning habitat for SJKF. The proposed action area contains only marginal foraging habitat as only one CNDDB occurrence documented over 17 years ago has been recorded within a ten-mile radius of the proposed action area. Several barriers, including the San Joaquin River, Millerton Lake, the Friant-Kern Canal, Auberry Road, and Friant Road, inhibit the continuity of surrounding vegetative communities, and therefore reduce the likelihood that SJKF would forage within the proposed action area. Precautionary mitigation measures are recommended to minimize the potential for individuals to be harmed during construction activities.

Migratory Birds

Construction activities would result in disturbance of nest sites for migratory birds and other birds of prey within the blue oak woodland through temporary increases in ambient noise levels and increased human activity within the proposed action area. Potential disruption of nesting migratory birds and other birds of prey during construction within the proposed action area could result in the abandonment of active nests. Recommended mitigation measures would minimize the potential for disruption of active nests through identification and avoidance.

Riparian Habitat, Sensitive Natural Communities

The proposed action area does not contain any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or the Service. The Proposed Actions would have no impact on any riparian habitat or sensitive natural communities because none exist within the proposed action area. No mitigation is required.

Wetlands and Waters of the U.S.

Approximately 0.56 miles of the proposed pipeline would be located within the lakebed of Millerton Lake, a designated water of the U.S. as defined by Section 404 of the CWA. Construction activities would occur within the ordinary high water mark of Millerton Lake, but would take place when water levels are below the proposed action area. The pipeline would be located underground and all surfaces would be restored to existing elevations and conditions. Implementation of the Proposed Actions would require obtaining a Section 404 permit from the Corps, a Section 401 Water Quality Certification from the RWQCB, and a Streambed Alternation Agreement with the CDFG. Adherence to the conditions of these permits would minimize the potential for impacts to Millerton Lake.

Native Resident or Migratory Fish or Wildlife Species

The proposed action area does not contain any native resident or migratory fish or wildlife species. Millerton Lake stocks warm water fish. Construction activities within the bed and banks of Millerton Lake would take place when water levels are below the proposed action area. The Proposed Actions would have no impact on native resident or migratory fish or wildlife species because none exist within the proposed action area. No mitigation is required.

Local Policies

The Proposed Actions would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Proposed Actions would have no effect on local policies or ordinances protecting biological resources because none exist within the proposed action area. No mitigation is required.

Habitat Conservation Plan

The Proposed Actions would not conflict with any provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Proposed Actions would have no effect on provisions of these plans because none exist within the proposed action area. No mitigation is required.

3.3.2.3 Cumulative Impacts

Cumulative projects in the vicinity of the project site, including growth resulting from build-out of the Millerton New Town Plan, are anticipated to permanently remove plant and wildlife resources, which could affect special-status species and their habitat, nesting and foraging habitat for resident and migratory birds, and/or local policies or ordinances protecting biological resources. The effects of the Proposed Actions are temporary in nature, and do not contribute to a cumulative direct or indirect loss of sensitive or special-status wildlife species and their habitat, loss of migratory birds, or conflict with local plans or policies protecting biological resources. The Proposed Actions would not contribute to cumulative impacts to biological resources. No mitigation is required.

3.3.3 Mitigation

BIO-1: A Biological Opinion with an incidental take statement shall be obtained from the Service and an Incidental Take Permit shall be obtained from the CDFG for impacts to CTS habitat prior to construction. All conditions of the statement and permit, including preservation and compensatory measures required by the Service and the CDFG, shall be implemented. Future maintenance and operations activities for the Proposed Actions shall be covered within the statement and permit. At a minimum, the following proposed mitigation measures shall be implemented to compensate for take of CTS:

- Before commencement of construction activities, three preservation credits shall be obtained from a Service and CDFG approved mitigation bank for every acre of upland habitat temporarily disturbed. Approximately 0.17 acres of CTS habitat would be affected as a result of the Proposed Actions, requiring the purchase of 0.51 acres of preservation credits.
- Staging areas shall be located within existing disturbed areas. Temporary

stockpiling of excavated or imported backfill material shall occur only in designated construction staging areas. Excess excavated soil shall be used onsite or disposed of at a regional landfill or other appropriate facility.

- 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.
- Should construction activities occur from December 1 to February 28, the activities shall be limited to between 30 minutes after sunrise and 30 minutes before sunset.
- Construction activities shall be finished by 7 pm daily to the maximum extent practicable.
- Within 30 days prior to commencement of construction activities, a qualified biologist approved by the Service will conduct a preconstruction survey for CTS within the vicinity of the proposed action area. A Service-approved biologist is any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the CTS. Resumes of all biologists proposed to capture or handle CTS and serve as biological monitors for the Proposed Actions shall be submitted by the applicant for approval by the Service no later than 20 days prior to the start of construction. No project activities shall begin until proponents have received written approval from the Service that the biologist(s) is qualified to conduct the work. The Service-approved biologist will be onsite until all trenching activities within the nonnative annual grassland are complete.
- A Service-approved biologist shall conduct a habitat sensitivity training for all construction personnel. The training shall include identification of special-status species, required practices before the start of construction, general measures that are being implemented to conserve these species as they relate to the Proposed Actions, and penalties for noncompliance. Supporting materials containing training information will be prepared and distributed. Upon completion of training, all construction personnel will sign a form stating that they have attended the training and understand all the conservation measures. Training shall be conducted in languages other than English, as appropriate. Proof of this instruction will be kept on file with the applicant. The applicant will provide the Service with a copy of the training materials and copies of the signed forms by project staff indicating that training has been completed within 30 days of the completion of the first training session. Copies of signed forms will be submitted monthly as additional training occurs for new employees. The crew foreman will be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. If new construction personnel are added, the crew foreman will ensure that the personnel receive the mandatory training before starting work.
- A representative shall be appointed by the applicant who will be the contact source for any contractor who might inadvertently kill or injure a CTS or find a dead, injured, or entrapped individual. The representative shall be identified during the construction personnel training. The representative's name and telephone number shall be provided to the Service prior to the initiation of ground-disturbance activities. Any worker who inadvertently injures or kills a CTS or finds one dead,

injured, or entrapped will immediately report the incident to the applicant's appointed representative. The applicant's representative will immediately notify the applicant, who will provide verbal notification to the Service Endangered Species Office in Sacramento, California, and to the local CDFG warden or biologist within one working day. The applicant will follow up with written notification to the Service and the CDFG within five working days. All CTS observations will be recorded on CNDDB field sheets and sent to the CDFG.

- The Service-approved biologist shall have oversight over the implementation of all conservation measures, and shall have the authority to stop project activities if any of the requirements associated with these measures is not being fulfilled. If the biologist has requested work stoppage due to take of any federally listed species, the Service and the CDFG will be notified within one working day via email.
- If requested during or upon completion of construction activities, the Service-approved biologist will accompany the Service or CDFG personnel on an onsite inspection of the site to review proposed project effects to the CTS and its habitat.
- To avoid entrapment of CTS, all excavated, steep-walled holes or trenches more than six inches deep within the nonnative annual grassland will be covered with plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. All trenches will be inspected by the biological monitor daily to insure that CTS have not become entrapped. If a CTS is found, the Service-approved biologist will remove the animal from the area and release it into a suitable burrow at least 300 feet outside the construction area.
- 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 action area.
- No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted during construction within the proposed action area to avoid harassing, killing, or injuring wildlife.
- A post-construction compliance report prepared by the monitoring biologist will be submitted to the Deputy Assistant Field Supervisor at the Sacramento Fish and Wildlife Office within 30 calendar days of the completion of construction activities within the nonnative annual grassland or within 30 calendar days of any break in construction activity lasting more than 30 days within the nonnative annual grassland. The report shall detail the following information: start date of groundbreaking activities and end date of completion; pertinent information concerning the success of the Proposed Actions in meeting compensation and other conservation measures; an explanation of failure to meet such measures, if any; known project effects on CTS, if any; any occurrences of incidental take of CTS; and other pertinent information.

BIO-2: The following mitigation measures shall be implemented to avoid temporary impacts to potential habitat for WST and American badger:

- A habitat sensitivity training shall be conducted for WST and American badger. The same information would be provided to crew members for these species as was identified in the habitat sensitivity training for CTS.
- A qualified biologist shall conduct a preconstruction survey within 30 days prior to commencement of construction activities within the nonnative annual grassland. The preconstruction survey would consist of walking throughout the nonnative annual grassland, identifying ground squirrel burrows, and pin-flagging burrows in the vicinity of the proposed action area that could potentially be occupied by WST and American badger.
- Regardless of whether WST and American badger is or is not observed during the preconstruction survey, the biological monitor, identified for CTS, that would be onsite during all trenching activities within the nonnative annual grassland, would also be monitoring for WST and American badger. Should WST and American badger be observed within the proposed action area, all construction activities within the construction footprint would halt until the species exits the site on its own.

BIO-3: The following mitigation measures shall be implemented to avoid impacts to potential nesting habitat for Swainson's hawk:

- A qualified biologist shall conduct a minimum of two protocol level preconstruction surveys during the recommended survey periods immediately prior to the anticipated commencement of construction activities, in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000). The surveys shall be conducted in the proposed action area and within 0.25 miles of the proposed action area where legally permitted. The biologist will use binoculars visually determine whether Swainson's hawk nests occur beyond the 0.25-mile survey area if access is denied on adjacent properties. If no active Swainson's hawk nests are identified on or within 0.25 miles of the proposed action area, a letter report summarizing the survey results shall be submitted to the County within 30 days following the survey, and no further mitigation for nesting habitat is required.
- Construction activities include heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities or other project-related activities that could cause nest abandonment or forced fledging within 0.25 miles of a nest site between March 1 and September 15. Should an active nest be present within 0.25 miles of construction areas, then the CDFG shall be consulted to establish an appropriate noise buffer, develop take avoidance measures, and implement a monitoring and reporting program prior to any construction activities occurring within 0.25 miles of the nest. The monitoring program would require that a qualified biologist shall monitor all activities that occur within the established buffer zone to ensure that disruption of the nest or forced fledging does not occur. Should the biologist determine that the construction

activities are disturbing the nest, then the biologist shall halt construction activities until the CDFG is consulted. The construction activities shall not commence until the CDFG determines that construction activities would not result in abandonment of the nest site. If the CDFG determines that take may occur, the County would be required to obtain a CESA Incidental Take Permit. Should the biologist determine that the nest has not been disturbed during construction activities within the buffer zone, then a letter report summarizing the survey results shall be submitted to the County and CDFG and no further mitigation for nesting habitat is required.

BIO-4: The following mitigation measures shall be implemented to avoid project-related impacts to nest sites for birds of prey and migratory birds. These measures would also mitigate for impacts to state-listed roosting bats:

- A qualified biologist shall conduct a total of three preconstruction surveys for active nests should construction commence during the nesting season for birds of prey and migratory birds (between February 1 and October 1). Cavities within trees in the vicinity of the proposed action area shall be surveyed for the roosting bats. The preconstruction surveys shall be conducted within 30 days prior to commencement of construction activities. If surveys show that there is no evidence of nests, then no additional mitigation will be required.
- If any active nests are located within the proposed action area, a 250-foot buffer shall be established around the nests. A qualified biologist shall monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. If the biologist identifies an active nest just outside the 250-foot buffer zone, the biologist may request more frequent site visits judging by the nature of the construction activity. The biologist shall delimit the buffer zone with construction tape or pin flags within 250 feet of the active nest and maintain the buffer zone until the end of breeding season or the young have fledged. Guidance from CDFG will be requested if establishing a 250-foot buffer zone is impractical.

BIO-5: The following conservation measures shall be implemented to avoid potential short-term adverse effects to SJKF in accordance with the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior To or During Ground Disturbance* (2011) (Recommendations):

- Within 30 days prior to commencement of construction activities, a qualified biologist approved by the Service will conduct a preconstruction survey for SJKF within the action area.

<u>Construction and Operational Requirements</u>

- To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and other designated areas. These areas shall also be included in preconstruction surveys and, to the extent possible, shall be established in locations disturbed by previous activities to prevent further impacts.

- Project-related vehicles shall observe a daytime speed limit of 20 miles per hour (mph) in all project areas, except on county roads and State and federal highways; this is particularly important at night when SJKF are most active. To the extent possible, night-time construction shall be minimized, however, if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
- To prevent inadvertent entrapment of SJKF or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the Service should be contacted for advice. If at any time a trapped or injured SJKF is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted below.
- SJKF are attracted to den-like structures, such as pipes. SJKF may enter stored pipes becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for SJKF before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a SJKF is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the SJKF has escaped.
- All food-related trash items, such as wrappers, cans, bottles, and food scraps, shall be disposed of in closed containers and removed at least once a week from the construction or project site.
- No firearms shall be allowed on the project site during construction activities.
- To prevent harassment, mortality of SJKF, or destruction of dens by dogs or cats, no pets shall be permitted on the project site during construction activities.
- Use of rodenticides and herbicides in the project site shall be restricted. This is necessary to prevent primary or secondary poisoning of SJKF and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to SJKF.
- A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a SJKF or who finds a dead, injured, or entrapped individual. The

representative shall be identified during the employee education program. The representative's name and telephone number shall be provided to the Service.

- An employee education program shall be conducted for all construction personnel including contractors, their employees, and military and/or agency personnel involved in the project. The training shall include a brief presentation by a biologist knowledgeable in SJKF biology and legislative protection to explain endangered species concerns. The program shall include a description of the SJKF and its habitat needs, a report of the occurrence in the vicinity of the project site, an explanation of the status of SJKF and its protection under the FESA, and a list of measures being taken to reduce impacts to the SJKF during project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people.
- Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. shall be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas shall be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.
- Any contractor, employee, or military or agency personnel who inadvertently kills or injures a SJKF shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped SJKF. The CDFG contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or biologist at (530) 934-9309.
- The Service's Sacramento Office and the CDFG will be notified in writing within three working days of the accidental death or injury to a SJKF during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species at 2800 Cottage Way, Suite W2605, Sacramento, CA 95825, (916) 414-6620 or (916) 414-6600. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670, (530) 934-9309.
- New sightings of SJKF shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the SJKF was observed shall be provided to the Service.

BIO-6: The following measures shall be implemented to avoid potential short-term adverse effects to waters of the U.S.:

The County shall obtain a Section 404 CWA permit from the Corps, a Section 401 Water Quality Certification from the RWQCB, and a 1600 Streambed Alteration Agreement

from the CDFG for construction activities within Millerton Lake. All permit conditions shall be implemented. Best Management Practices shall be implemented to ensure that no pollutants will be discharged into jurisdictional waters. Full restoration of the site would mitigate for the temporary impacts of construction.

3.4 Cultural Resources

"Cultural resources" is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation that outlines the U.S. Government's responsibility to cultural resources. Section 106 of the NHPA, as outlined in its implementing regulations at 36 CFR Part 800, requires Federal agencies to take into consideration the effects of their undertakings on cultural resources included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Cultural resources that are included in, or eligible for inclusion in, the NRHP are referred to as historic properties. The eligibility of a cultural resource for NRHP inclusion is determined by evaluating the resource using criteria set forth in 36 CFR 60.4.

The California Environmental Quality Act (CEQA) requires that, for projects financed by or requiring the discretionary approval of public agencies in California, the effects that a project has on historical and unique archaeological resources must be considered (PRC Section 21083.2). Historical resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance (PRC Section 50201). Historic properties under NRHP are considered eligible for listing in the California Register of Historic Places, and thus are significant historical resources for the purposes of CEQA (PRC Section 5024.1[d][1]).

3.4.1 Affected Environment

This section provides an overview of the cultural setting within the Proposed Action area and evaluates the likelihood that significant cultural resources (i.e., historic properties or significant historical resources) would be affected by the Proposed Action. The proposed action area, also known as the area of potential effects (APE) for the purposes of Section 106 compliance, includes the entire pipeline construction footprint, comprising the length of the pipeline as well as lands located approximately 25 feet east and west of the pipe centerline.

Prehistory

The APE is located in the central Sierra Nevada foothills bordering the eastern margin of California's Central Valley. Although absolute consensus on the cultural chronology for Central California as a whole is lacking, Rosenthal et al. (2007, 150), synthesizing previously-established frameworks and new data, have recently proposed the following chronology for the region: Paleo-Indian (11,500 to 8550 B.C.), Lower Archaic (8550 to 5550 B.C.), Middle Archaic (5550 to 550 B.C.), Upper Archaic (550 B.C. to A.D. 1100), and Emergent (A.D. 1100 to Historic). These temporal divisions are based on technological differences evident in the material archaeological remains, as well as environmental data indicative of climatic shifts that influenced the depositional history of archaeological sites throughout Central California.

Basally thinned and fluted projectile points, comparable to the Paleo-Indian "Clovis" technology, associated with the hunting of now-extinct mega-fauna and dating to between 11,500 and 9550 B.C. in other parts of North American, provide the earliest evidence for human occupation in the Central Valley. A limited number of points of this type have been found in the San Joaquin Valley, most deriving from the remnant Late Pleistocene shoreline of Tulare Lake in the southern part of the valley (Rosenthal et al. 2007, 151).

Lower Archaic occupation of the Central Valley is mostly represented by isolated finds of stemmed points, chipped stone crescents, and other flaked stone tools. Foothill sites dating from the Lower Archaic have yielded similar chipped stone artifacts, as well as a variety of handstones, millingslabs, and cobble-core tools, suggesting a reliance on a variety of animal and plant resources and perhaps a seasonally structured settlement system during this period (Rosenthal et al. 2007, 151-152).

The emergence of two distinct settlement-subsistence adaptations, one centering on the foothills and the other on the valley floor, is evident from buried archaeological deposits dating to the Middle Archaic period. Foothill artifact assemblages, comprising expedient flaked and ground stone tools used for procuring and processing food, indicate high residential mobility, while valley assemblages containing more specialized tools, trade goods, and ceremonial objects reflect increased residential stability (Rosenthal et al. 2007, 152-154).

During the Upper Archaic, subsistence economies continued to vary regionally; however, seasonally structured resources that could be harvested and processed in bulk were of prime importance throughout the region. In particular, the artifact assemblages of both valley and foothill sites indicate a reliance on acorns. Cultural diversity, marked by differences in artifact styles, burial patterns, and other material culture elements, was also pronounced during this period (Rosenthal et al. 2007, 155-157).

The Emergent period is characterized by the disappearance of many archaic technologies and cultural traditions, the introduction of the bow and arrow, and increased social complexity as evidenced by the elaboration of development of both large village sites and smaller residential communities in the valley and foothills. The regional cultural traditions similar to those existing at the time of Euro-American contact emerged at this time (Rosenthal et al. 2007, 157-159).

Ethnographic Context

Prior to widespread disruption of traditional lifeways resulting from Euro-American settlement in the area, the San Joaquin Valley and surrounding foothills were occupied by aboriginal groups known as Yokuts. Primary ethnographic sources for Yokuts information include: Gayton, 1948; Kroeber, 1925; Powers, 1877; Spier, 1954, 1978; and Wallace, 1978. Though loosely connected through trade and marriage, there was no Yokuts nation or overarching political unity. The distinctions between subgroups were mostly linguistic and territorial (Spier, 1978:471; Wallace, 1978:462).

The western slopes of the Sierra Nevada, from the Fresno River in the north to the Kern River in the south, were occupied by about 15 named Yokuts tribes known collectively as Foothill Yokuts. Northern Foothill Yokuts, in particular the Chukchansi, Dumna, Gashowu, and Kechayi

tribes, inhabited areas in the vicinity of the proposed action area (Kroeber, 1925:481, Spier, 1978:471).

The Foothill Yokuts subsistence economy was based on hunting and gathering, with fishing as a supplement. Deer, quail, and acorns served as dietary mainstays; however, the Foothill Yokuts diet included a wide variety of animal and plant foods (Spier, 1978:472). Hunting technology included the bow and arrow, various traps, poisons, and fish weirs. Bedrock mortars and groundstone pestles, soapstone boiling stones, and basketry were common components of the Foothill Yokuts material culture (Spier, 1978:473-474).

History

There is little evidence for Euro-American intrusion into the proposed action area prior to the mid-1800s. The discovery of gold in 1848 at Coloma, in the northern Sierra Nevada foothills, also precipitated an influx of settlers to the current project area. The nearby town of Millerton, now under Millerton Lake, prospered during this period (Hoover et al., 1990:88).

Like many other early towns in California, Millerton (originally called Rootville) began as a mining camp and grew as merchants, doctors, and businessmen settled in the area. The town grew rapidly but remained small, relying on the support of neighboring Fort Miller and the addition of the Alex Ball lumber mill in 1853 (Winchell, 1933:28-30).

Fresno County was established in 1856 from portions of Mariposa, Merced, and Tulare counties with the town of Millerton as its county seat (Hoover et al., 1990:87). After devastating floods in 1862 and 1867 and the fires of 1870, the county seat was moved from Millerton to the newly created Central Pacific Railroad Station in Fresno City. Millerton remained a sleepy town into the twentieth century until it was abandoned as a result of the construction of Friant Dam, which led to the inundated of the former town site (California State Parks, 2009).

The Table Mountain Rancheria was established in 1916 along Millerton Road near the town of Friant. Home to several dislocated Native American families in the Friant-Winchell Creek area, the original Rancheria consisted of 116.76 acres. In 1959 the residents of Table Mountain Rancheria had their federal recognition terminated through enactment of the California Rancheria Act of 1958. For more than two decades, the tribe appealed to the federal government to restore their rights. In December 1983, Table Mountain Rancheria was recognized as an "Indian tribal entity," eligible to receive services from the BIA.

Native American Consultation

Analytical Environmental Services (AES), the consultant hired by the County to conduct the cultural resources study related to the Proposed Action, requested that the State of California Native American Heritage Commission (NAHC) review its Sacred Lands File (SLF) for information on Native American cultural resources in the project area and provide AES with a list of appropriate Native American contacts for further consultation. The results of the NAHC SLF search did not indicate the presence of Native American sacred sites within a one-half mile radius of the proposed project APE (AES 2011b).

Pursuant to 36 CFR Part 800.3(f)(2) and 36 CFR Part 800.4(2)(4), as part of the Section 106 process Reclamation is required to identify and consult with Indian tribes that might attach religious and cultural significance to historic properties in the APE. Reclamation has sent letters to the Table Mountain Rancheria, Big Sandy Rancheria of Mono Indians, and Cold Springs Rancheria of Mono Indians, inviting their assistance in identifying such properties. No culturally significant or sacred sites have been identified by any of the tribes contacted; however, Reclamation is currently working to address tribal concerns through Section 106 consultation.

Cultural Resources Identification Efforts

In an effort to indentify historic properties and other cultural resources that may be impacted by the Proposed Action, AES requested that a records search and literature review for the project area be conducted by the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (AES, 2011b). The results of the records search indicate that five previous cultural resources studies have been conducted within the current APE and one cultural resource, identified as a granite outcrop containing two bedrock mortar cups, had previously been recorded in this project area.

One of the previous studies, conducted by Wren (1988b), took place ahead of the original 1989 construction of the Winchell Cove pumps and pipeline. During a pedestrian survey, which covered a construction footprint more or less identical to the current Proposed Action APE, Wren (1988b) relocated the bedrock mortar site originally recorded by Theodoratus and Crain (1962) and updated by Brown, Sampson, and Kelly (1978). At that time, Wren (1988b:21) noted that the planned placement of the proposed 10-inch line was well above the archaeological site boundary and should not have an adverse effect on the resource.

Additional field surveys covering the Proposed Action area were conducted by AES in 2008 and 2010. The 2008 survey was performed in conjunction with the Table Mountain Rancheria 175-acre Fee-to-Trust Project, which resulted in nine parcels of land totaling approximately 175 acres being transferred into Federal trust status on behalf of the tribe in December 2010. In March and November 2010, as part of the Winchell Cove Pipeline Project cultural resources study, AES conducted intensive pedestrian surveys of the accessible portions of the Proposed Action area not located on tribal land. No historic properties or other cultural resources were identified within the Proposed Action APE during any of these identification efforts.

3.4.2 Environmental Consequences

3.4.2.1 No Action

Under the No Action Alternative, the project area would remain undisturbed and no potential impacts to cultural resources would occur.

3.4.2.2 Proposed Action

Under the Proposed Action alternative, trenching for the backup pipeline would occur immediately adjacent to the area previously disturbed during the original pipeline installation. During cultural resources field surveys conducted when the first pipeline was constructed, and more recently in association with the current project, no cultural resources were identified within the Proposed Action APE. Further, based on soil survey information and geoarchaeology

sensitivity studies for the region, the potential for buried archaeological resources in the Proposed Action area is low to very low (see Meyer et al. 2010). Therefore, no impacts to cultural resources are anticipated to occur through implementation of the Proposed Action. Mitigation measures presented in **Section 3.4.4** would reduce the potential for impacts to unknown buried cultural resources.

3.4.2.3 Cumulative Impacts

As there are no known cultural resources recorded within the current APE, there will be no cumulative impacts to resources in the immediate Proposed Action area. At present the potential cumulative impacts to cultural resources outside of the current Proposed Action area resulting from possible future water transfers and development within the CSA 34 service area, which may or may not be approved, are unknown. Any such future actions would be expected to undergo appropriate regulatory review as required under local preservation ordinances, CEQA, and/or Section 106 of the NHPA, during which potential impacts to cultural resources would be considered.

3.4.3 Mitigation

CR-1: In the unlikely event that previously unknown cultural materials, such as flaked stone, groundstone, or historic debris are inadvertently discovered during ground-disturbing activities, work should stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop treatment measures in consultation with appropriate agencies in accordance with 36 CFR Part 800.13. In the case of such a discovery, Reclamation's archaeologists must be notified and be given an opportunity to assess the find prior to work starting again in the immediate vicinity of the find.

CR-2: If human remains are encountered within land not subject to federal or tribal jurisdiction, work should halt in the vicinity of the discovery and the Fresno County Coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the find. If the Coroner determines that the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this determination. The Most Likely Descendant (MLD) of the deceased will be contacted by the NAHC, and work will not resume until the MLD has made a recommendation for the treatment of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. Work may resume if NAHC is unable to identify an MLD or the descendant fails to make a recommendation within 48 hours.

CR-3 Pursuant to Reclamation Directives and Standards LND 07-01, the inadvertent discovery of human remains on Reclamation land requires immediate oral notification of the find to Reclamation cultural resources staff, as well as a written report of the discovery within 48 hours. Additionally, activity in the area shall cease and the find stabilized and protected until authorization to proceed is provided by Reclamation. Such discoveries require compliance with all appropriate Federal cultural resources laws and may require further Section 106 consultation. If the human remains are determined to be Native American,

the discovery will be handled in accordance with Native American Graves Protection and Reburial Act (NAGPRA) regulations (43 CFR Part 10).

CR-4: If human remains are encountered on Tribal lands, work shall halt in the vicinity of the find and Table Mountain Rancheria's Cultural Resources Director shall be notified immediately, pursuant to 36 CFR Part 800.13 of NHPA, *Post-Review Discoveries*, and 43 C.F.R.§ 10.4 (2006) of NAGPRA, *Inadvertent Discoveries*. No further ground disturbance shall occur in the vicinity of the find until the Tribal Official has examined the find and agreed on an appropriate course of action.

3.5 Socioeconomics/Environmental Justice

According to guidance from the CEQ (1997) and the EPA (USEPA, 1998), communities may be considered "minority" if the cumulative percentage of minorities within a defined geographic area is greater than fifty percent (primary method of analysis) or the cumulative percentage of minorities within the defined geographic area is less than fifty percent, but the percentage of minorities is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (secondary method of analysis). Executive Order (EO) 12898, requires that federal agencies make achieving environmental justice part of their mission by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Communities may be considered "low-income" under the executive order if the median household income for the defined geographic area is below the poverty line (primary method of analysis), or if other indications are present that indicate a low-income community is present within the census tract (secondary method of analysis).

3.5.1 Affected Environment

The project site is located in the vicinity of the town of Friant within unincorporated Fresno County. Land uses surrounding the project site consist of sparse residential development in addition to grazing land. Residential development is primarily located within clusters of housing communities located adjacent to Millerton Road (i.e. Eagle Springs Golf and Country Club).

Demographic data for the Friant/Millerton area (zip code 93626) represents the potentially affected population within the project area. In 2000, the estimated population of Friant/Millerton area was approximately 1,119 persons, with the following ethnic breakdown:

- White 88% (985 persons)
- Hispanic 9.3% (104 persons)
- Native American 2.1% (23 persons)
- Asian 2.3% (26 persons)
- African American 0.4% (4 persons)

U.S. Census data for the year 2000 reported the average household size in Friant as 2.4 persons, which results in a federal poverty threshold of $11,869 (U.S. Census Bureau, 2006). As

identified above, the 1999 median household income in Friant was $40,170. Since the median household income level is $28,687 above the poverty threshold, Friant is not defined as a low-income community. Pursuant to the CEQ and EPA guidance on environmental justice analysis, there are no low-income populations identified in the project area.

3.5.2 Environmental Consequences

3.5.2.1 No Action

Continued use of the existing pipeline at full design capacity is likely to result in significant damage to this facility in the long-term, resulting in interrupted water service to existing water users within CSA 34 and substantial costs associated with repair and property damages. The No Action Alternative would not have a disproportionately high and adverse human health or environmental effect on low-income or minority populations because no low-income or minority populations are present adjacent to or near the proposed pipeline alignment.

3.5.2.2 Proposed Action

Short-term impacts of constructing the proposed pipeline would not have a disproportionately high and adverse human health or environmental effect on low-income or minority populations because no low-income or minority populations are present adjacent to or near the proposed pipeline alignment.

3.5.2.3 Cumulative Impacts

As discussed above, the socioeconomic conditions would not change as a result of implementing the Proposed Action and, therefore, no cumulative impact would occur.

3.6 Air Quality

The Federal Clean Air Act (CAA) was enacted for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. Basic components of the CAA and its amendments include national ambient air quality standards (NAAQS) for major air pollutants and state implementation plans (SIPs). The United States EPA is the federal agency responsible for identifying criteria air pollutants (CAPs), establishing NAAQS, and approving and overseeing state air programs as they relate to the CAA.

Section 176 of the CAA requires that any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable SIP required under Section 110 (a) of the CAA (42 USC § 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken.

The EPA has identified six CAPs, including ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), oxides of nitrogen (NOx), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead (Pb), that are used as indicators of regional air quality. California enacted the California Clean Air Act (CCAA), which has identified four additional CAPs, sulfates, hydrogen sulfide, vinyl chloride, and visible reducing particles. The six national CAPS and the four state CAPs identified under the CCAA comprise the California Ambient Air Quality Standards (CAAQS). Regulation of air pollution is achieved through both the NAAQS and CAAQS and emission limits for individual sources of air pollutants. The NAAQS and CAAQS for the pollutants of concern (ozone, PM_{10}, and $PM_{2.5}$) are presented in **Table 3-1**. For some of the pollutants, the EPA and California have identified air quality standards expressed in more than one averaging time in order to address the typical exposures found in the environment. For example, ozone is expressed as an eight-hour standard under the NAAQS and an eight- and one-hour averaging time under the CAAQS.

3.6.1 Affected Environment

The proposed pipeline alignment is located within the San Joaquin Valley Air Basin (SJVAB). The SJVAB is approximately 300 miles long and shaped like an oblong bowl, allowing air pollutants, such as ozone (NOx and reactive organic gases [ROG] O_3 precursors), PM_{10}, and $PM_{2.5}$ to be retained. Regional climate and topography play a large role in the ambient air pollution concentration that affects the SJVAB, which lies within the central portion of the San Joaquin Valley. Airflow patterns within the SJVAB can generally by characterized by one of four directional types and include: northwesterly up-valley, marine winds from the San Francisco Bay Area, down-valley and foothill drainage (down sloping) winds, and northerly (non-marine) winds resulting from the exiting of a low pressure system (Western Regional Climate Center [WRCC], 2010).

TABLE 3-1
NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Standard in parts per million		Standard in microgram per cubic meter		Violation Criteria	
		CAAQS	NAAQS	CAAQS	NAAQS	CAAQS	NAAQS
Ozone	1 hour	0.09	-	180	-	If exceeded	N/A
	8 hours	0.07	0.075	137	157	N/A	If exceeded on more than 3 days in 3 years
PM_{10}	Annual arithmetic mean	N/A	N/A	20	N/A	N/A	If exceeded
	24 hours	N/A	N/A	50	150	N/A	If exceeded on more than 1 day per year
$PM_{2.5}$	Annual arithmetic mean	N/A	N/A	12	15	N/A	If exceeded
	24 hours	N/A	N/A	N/A	35	N/A	If exceeded on more than 1 day per year

CAAQS = California Ambient Air Quality Standard
NAAQS = National Ambient Air Quality Standard
Source: California Air Resource Board, 2010a.

Attainment Status

The EPA and California Air Resource Board (CARB), the agency which has jurisdiction over air quality in California, identifies areas throughout California that meet the NAAQS and/or CAAQS, these areas are labeled either attainment or unclassifiable. Areas that do not meet the NAAQS and/or CAAQS are labeled either "nonattainment" or "maintenance."

The EPA and CARB further classify nonattainment areas according to the level of pollution in each. There are five classes of nonattainment areas: maintenance (recently became compliant with the NAAQS or CAAQS), marginal (relatively easy to obtain levels below the NAAQS or CAAQS), serious, severe, and extreme (will be difficult to reach levels below NAAQS or CAAQS). The EPA and CARB uses these classifications to design clean-up requirements appropriate for the severity of the pollution and set realistic deadlines for reaching those clean-up goals. **Table 3-2** shows the attainment status for the SJVAB.

Ozone

Photochemical reactions involving ROG and NO_X resulting from the incomplete combustion of fossil fuels is the largest source of ground-level O_3. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. As a photochemical pollutant, O_3 is formed only during daylight hours under appropriate conditions, but is destroyed throughout the day and night. O_3 is considered a regional pollutant, as the reactions forming it take place over time and are often most noticeable downwind from the sources of the emissions.

TABLE 3-2
FEDERAL AND CALIFORNIA AMBIENT AIR ATTAINMENT STATUS

Pollutants	Designation/Classification	
	Federal	California
Ozone 1-hour	No Federal Standard	Nonattainment/Severe
Ozone 8-hour	Nonattainment/Serious	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: SJAPCD, 2008.

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 (such as nitrates and sulfates), organic chemicals, metals, soil or dust particles, and

allergens (such as fragments of pollen or mold spores). The size of particles is directly linked to their potential for causing health problems. PM_{10} and $PM_{2.5}$ pose the greatest public health concerns, because they can traverse deep into the lungs (PM_{10}) and can be small enough to enter the bloodstream ($PM_{2.5}$).

Attainment and nonattainment areas are identified through monitoring. Unclassifiable areas are those for which air monitoring has not been conducted but are assumed to be in attainment under the NAAQS and/or CAAQS. **Table 3-3** provides a three-year summary listing the highest annual concentration observed for pollutants of concern in the SJVAB (state 1- and federal 8-hour ozone, state and federal 24-hour average PM_{10}, and federal 24-hour $PM_{2.5}$). The monitoring station is located at the Clovis-N Villa Avenue intersection, in the City of Clovis. This station was selected because of its relatively close proximity to the Proposed Action.

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.

TABLE 3-3
FEDERAL AND STATE AIR MONITORING DATA

Pollutant	Standard	2006	2007	2008
Ozone State 1-hour:				
Highest	0.09 ppm	0.127	0.121	0.156
Days Exceeded		37	14	33
Ozone Federal 8-hour:				
Highest	0.075 ppm	0.096	0.101	0.127
Days Exceeded		51	30	44
PM_{10} 24-hour State:				
Highest	50 ug/m^3	106	111	79.0
Days Exceeded		72	[1]	78.7
PM_{10} Federal 24-hour:				
Highest	150 ug/m^3	104	116	80.5
Days Exceeded		0	0	0
$PM_{2.5}$ Federal 24-hour:				
Highest	35 ug/m^3	65.8	64.7	52.3
Days Exceeded		28.0	51.5	42.5

Note: [1] There was insufficient (or no) data available to determine the value.
Source: CARB, 2010b

The land surrounding the project alignments is primarily uninhabited open space. The proposed pipeline alignment would go through the Millerton Lake Marina located at the northern end of

Winchell Cove Road (**Figure 2**). The nearest sensitive receptor to the project alignment is a residence located 450 feet south of Millerton Lake and approximately 550 feet from the pipeline, it should be noted that the pipeline is located within the Millerton Lake bed at this distance. The on-shore distance to this receptor is 1,880 feet. The next closest residence is in the Eagle Springs Golf Course complex and is located 1,950 feet southeast of the proposed pipeline alignment across Millerton Road. No schools or hospitals are located along the proposed pipeline alignment. Construction activity would only occur within 20 feet of the proposed pipeline alignment.

3.6.2 Environmental Consequences

3.6.2.1 No Action

Under the No Action Alternative, there would be no construction or ground disturbing activities. No impacts to air quality would occur. Should the system fail, a separate environmental review would occur; any potential impacts to air quality would be identified at that time.

3.6.2.2 Proposed Action

Air Quality Standards

Construction

Construction emissions from grading, trenching, paving, and worker trips were estimated using the 2007 Urban Emissions (URBEMIS) air quality model. URBEMIS estimated construction emissions are shown in **Table 3-4** and compared to the SJVAPCD CEQA Guidelines (Guidelines) thresholds of 10 tons per year for ROG and NOx and implementation of mitigation measures for PM_{10} required by the SJVAPCD for all construction projects. As shown in **Table 3-4** construction emissions of ozone precursors and PM_{10} and $PM_{2.5}$ from exhaust emissions would not exceed de minimus levels or Guidelines thresholds. With the implementation of **Mitigation Measure AQ-1** in **Section 3.6.3**, PM_{10} and $PM_{2.5}$ emissions resulting from construction of the Proposed Action would be reduced. Construction of the Proposed Action would not conflict with or obstruct implementation of the SJVAPCD 2004 Ozone or 2008 Particulate matter Attainment Plans and would not cause or contribute to a violation of the NAAQS or CAAQS. Proposed construction activities would not contribute to an exceedance of ambient air quality standards.

TABLE 3-4
CONSTRUCTION EMISSIONS

Construction Year	ROG	NOx	PM10[1]	PM2.5[1]	PM10[2]	PM2.5[2]	CO_2
	Tons per Year						
2010	0.19	1.49	0.23	0.11	0.08	0.08	144.83
De Minimus Levels	10	10	100	100	100	100	N/A
Exceedance	No	No	No	No	No	No	N/A
SJVAPCD Thresholds	10	10	N/A	N/A	N/A	N/A	N/A
Exceedance	No	No	N/A	N/A	N/A	N/A	N/A

[1] Total PM10 and PM2.5 emissions.
[2] PM10 and PM2.5 from exhaust, N/A = not applicable.
Source: URBEMIS, 2007.

Operation

Operation of the Proposed Action would not result in an increase in maintenance or worker trips over current levels for the existing pipeline. No operational emissions are expected, and no operating permit is required. No adverse impacts to air quality would occur as a result of operation of the Proposed Action.

Sensitive Receptors

Diesel particulate matter (DPM) and fugitive dust are of concern during the construction phase of the proposed pipeline. Construction would include grading, trenching, and paving. These activities utilize heavy equipment, which use diesel fuel and emit DPM. The land surrounding the project site is primarily undeveloped land with scattered residences, and limited recreation facilities. The nearest sensitive receptor is located approximately 550 feet south of the pipeline alignment within Millerton Lake, and approximately 1,880 feet east of the on-land pipeline alignment. DPM generally dissipates to 9 percent of its original concentration within 500 feet of the source. Due to the distance of the nearest sensitive receptor, topography, and the dissipation rate of DPM and fugitive dust emitted during construction, sensitive receptors would not be exposed to fugitive dust or substantial concentrations of DPM.

Odor

Under the SJVAPCD, CEQA Guidelines significance is determined in two steps; first does the project produce odors and second are there receptors close to the odor source. Construction odor is generally not noticeable beyond the boundaries of the project alignment and there are no receptors within 550 feet of the project alignment. As a result, construction activities would not create objectionable odors that would adversely affect surrounding residents.

3.6.2.3 Cumulative Impacts

A cumulative air quality analysis considers a project over time and in conjunction with other related past, present, and reasonably foreseeable future projects. The SJVAPCD recommends that a project's impact on the ambient concentrations of ozone, PM_{10}, and CO be analyzed in conjunction with other foreseeable projects.

Under the SJVAPCD CEQA guidelines, a significant cumulative impact would occur if a project exceeds the SJVAPCD thresholds of 10 tons per year of ROG or NOx. As shown in **Table 3-4** project emissions of NOx and ROG do not exceed these thresholds. CO and PM_{10} emissions are considered local pollutants, due to the rapid rate at which these pollutants disperse. Due to the distance of the nearest sensitive receptor (approximately 550 feet) to the pipeline alignment, the project would not expose sensitive receptors to high cumulative concentrations of CO and PM_{10}.

3.6.3 Mitigation

AQ-1: The project proponent shall ensure through contractual obligations that the following PM control measures are implemented during construction, as required by the SJVAPCD:

- All disturbed areas, including storage piles, which are not being actively utilized for

construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover vegetative ground cover.

- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut &fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

3.7 Global Climate

3.7.1 Affected Environment

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. The Governor's Office of Planning and Research recommends quantification of greenhouse gas (GHG) emissions, assessment of the significance of any impact on climate change, and identification of mitigation or alternatives that would reduce GHG emissions. Climate change has the potential to reduce the snow packs in the Sierra Nevada Mountains, cause the sea level to rise, and increase the intensity of wildfires and storms intensity.

The regulatory background provided below gives context to the issues of climate change and importance to reducing GHG emissions.

Federal

The following are the most recent regulatory actions taken by the EPA and the CEQ:

- In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), EPA has issued the Final Mandatory Reporting of Greenhouse Gases Rule. Signed by the Administrator on September 22, 2009, the rule requires in general that

suppliers of fossil fuels and industrial GHGs, manufacturers of vehicles and engines outside of the light duty sector, and facilities that emit 25,000 metric tons or more of GHGs per year to submit annual reports to EPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.

- On February 23, 2010 the CEQ provided for public comment, its Draft NEPA Guidance on Consideration of the Effects of Climate Change and GHG emissions (NEPA Guidance). The NEPA Guidance provides Federal agencies guidance on how to analyze the environmental impacts of greenhouse gas emissions and climate change when they describe the environmental impacts of a proposed action under NEPA. The NEPA Guidance provides practical tools for agency reporting, including a presumptive threshold of 25,000 metric tons of carbon dioxide equivalent emissions from the proposed action to trigger a quantitative analysis, and instructs agencies how to assess the effects of climate change on the proposed action and its design. The NEPA Guidance exempts land and resource management actions and does not propose to regulate greenhouse gases. The NEPA Guidance does not provide a numerical GHG emission threshold. Public comment on the NEPA Guidance will be taken until May 9, 2010, after that the CEQ will move quickly to approve the NEPA Guidance.

California

Signed by the California State Governor on September 27, 2006, Assembly Bill (AB) 32 codifies a key requirement of EO S-3-05, specifically the requirement to reduce statewide GHG emissions to year 1990 levels by the year 2020. AB 32 tasks CARB with monitoring state sources of GHGs and designing emission reduction measures to comply with the law's emission reduction requirements.

AB 32 required that CARB prepare a comprehensive "scoping plan" that identifies all strategies necessary to fully achieve the required 2020 emissions reductions. In early December 2008, CARB released its scoping plan to the public and on December 12, 2008, the CARB board approved the scoping plan. CARB provided an update to the December, 2008 Scoping Report in November, 2009.

The scoping plan calls for an achievable reduction in California's carbon footprint. Reduction of GHGs emissions to 1990 levels are proposed, which equates to cutting approximately 30 percent from estimated GHG emission levels projected in 2020, or about 15 percent from today's levels. The scoping plan relies on existing technologies and improving energy efficiency to achieve the 30 percent reduction in GHG emission levels by 2020. The scoping plan provides the following key recommendations to reduce GHG emissions:

- Expand and strengthen existing energy efficiency programs as well as building and appliance standards;
- Achieve a statewide renewable energy mix of 33 percent;
- Develop a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establish targets for transportation-related GHG emissions for regions throughout

California, and pursuing policies and incentives to achieve those targets;

- Adopt and implement measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.

3.7.2 Environmental Consequences

3.7.2.1 No Action

Under the No Action Alternative, emissions associated within construction and operation would not occur. No impact to air quality would occur. Should the system fail, a separate environmental review would occur; any potential impacts related to GHG emissions would be identified at that time.

3.7.2.2 Proposed Action

The 2010, CEQ NEPA Guidance provides that if project-related emissions are below 25,000 metric tons per year of GHG emissions, then a qualitative analysis of project-related climate change impact is sufficient. The SJVAPCD provides CEQA Guidelines for GHG stationary sources; however, project construction is considered indirect mobile sources; therefore, the SJVAPCD CEQA Guidelines thresholds are not applicable.

Project-related GHG emissions are significantly below 25,000 metric tons per year of GHG emissions. The project would emit 144.83 tons of GHGs during construction. These emissions are short-term and temporary. Implementation of **Mitigation Measure AQ-2** would result in the implementation of performance based BMPs, further reducing construction-related GHG emissions.

3.7.2.3 Cumulative Impacts

As discussed in **Section 3.6.2.3**, project emissions of NOx and ROG do not exceed SJVAPCD thresholds and, due to the distance of the nearest sensitive receptor, the project would not expose sensitive receptors to high cumulative concentrations of CO and PM_{10}.

3.7.3 Mitigation

AQ-2: The project proponent shall ensure through contractual obligations that the following best management practices are implemented during construction to minimize GHG emissions:

- The contractor shall use alternative-fueled (e.g. biodiesel, electric, etc) construction vehicles/equipment of at least 15 percent of their fleet.
- The contractor shall use local building materials of at least 10 percent.
- The contractor shall recycle at least 50 percent of construction waste or demolition materials.

3.8 Indian Trust Assets

3.8.1 Affected Environment

ITAs are legal interests in assets that are held in trust by the United States (U.S.) for Federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the U.S. on behalf of Federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such as compensation or injunction, if there is improper interference. ITA cannot be sold, leased or otherwise alienated without the U.S.' approval. "Assets" can be real property, physical assets, or intangible property rights, such as a lease, or right to use something; which may include lands, minerals and natural resources in addition to hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land. Reclamation shares the Indian Trust responsibility with all other agencies of the Executive Branch to protect and maintain ITA reserved by or granted to Indian tribes, or Indian individuals by treaty, statute, or Executive Order. A portion of pipeline would extend through an existing CSA 34 public utility easement located on Table Mountain Rancheria tribal trust land. Table Mountain Rancheria tribal trust land is the only ITA located near the project vicinity.

Reclamation assesses the effect of its programs on tribal trust resources and federally-recognized tribal governments. To carry out this policy, the Reclamation incorporated procedures into its NEPA compliance procedures to require evaluation of the potential effects of its proposed actions. Reclamation will comply with procedures contained in Department Manual Part 512, Chapter 2 guidelines, which protect ITAs.

3.8.2 Environmental Consequences

3.8.2.1 No Action

Under the No Action Alternative, there would be no impacts to ITAs since no change to existing conditions would occur.

3.8.2.2 Proposed Action

As stated above, a portion of the proposed pipeline would extend through an existing CSA 34 public utility easement located on Table Mountain Rancheria tribal trust land. The proposed pipeline would be located underground, and would not impact land uses within the tribal trust land. Further, the pipeline would be located within an existing easement, and no new or modified easements would be recorded on tribal trust land. No other ITAs are located within the Proposed Action's area of potential effects. Therefore, the Proposed Action would not adversely affect ITAs.

3.9 Executive Order 13007– Indian Sacred Sites

3.9.1 Affected Environment

Sacred sites are defined in EO 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

EO 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites.

As described in **Section 3.4**, the State of California NAHC was asked to review the Sacred Lands file for information on Native American cultural resources on the project site on March 4, 2010. The NAHC responded on March 8, 2010, indicating they have no knowledge of any cultural resources located within the project site. At the same time, the NAHC provided a list of seven individuals/ organizations for further consultation. The request for the sacred lands search is included in the Confidential Cultural Resource Report (AES, 2011b).

3.9.2 Environmental Consequences

3.9.2.1 No Action

Under the No Action Alternative, there would be no impacts to Indian sacred sites since conditions would remain the same as existing conditions.

3.9.2.2 Proposed Action

There are no known sacred sites located within the project area and mitigation is provided in **Section 3.4.3** to reduce the potential for impacts to unknown buried cultural resources. Thus, the Proposed Action would not impact known Indian sacred sites and/or prohibit access to and ceremonial use of these resources.

3.10 Indirect Impacts

The CEQ Regulations for implementing NEPA (Section 1508.8) defines indirect effects as impacts caused by an action that are later in time or farther removed in distance, but are a reasonably foreseeable result of the action. Similarly, CEQA Guidelines Section 15358(2) defines indirect effects as those “which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced change in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural

systems, including ecosystems." Examples of indirect effects include effects resulting from off-site mitigation or community growth induced by the implementation of a project.

As stated in **Section 1.3**, the scope of this EA/IS is limited to the Winchell Cove Pipeline Project which is needed under existing conditions to serve existing demands on the CSA 34 water system. Indirect growth inducement could result if the project removed an obstacle to population growth that would lead to the construction of new development; however, in this case, any water purveyance beyond currently permitted water rights must be approved by Reclamation. While the infrastructure may eventually be utilized to provide water supply to future developments within the CSA 34 service area, specifically the Millerton New Town Specific Plan which is currently undergoing NEPA review by Reclamation for the approval of water rights to serve the development, no changes to water rights or permitted capacity of the CSA 34 water system would result from the proposed Winchell Cove Pipeline Project. Reclamation and the County can approve the Proposed Action, without committing to approval of future developments that may utilize water from the CSA 34 system.

Because no off-site mitigation is necessary to minimize the potential effects of the Proposed Action and because the Winchell Cove Pipeline Project is needed under existing conditions to provide a more reliable water system and contingency plan for providing water to users in CSA 34, and therefore would not, in itself, have a growth inducing effect on the surrounding community, no indirect impacts are expected to occur as a result of the Proposed Action. Potential consequences of buildout of the Millerton New Town Specific Plan, should Reclamation choose to approve the water right application for that project, will be fully evaluated within a separate EA prepared pursuant to NEPA. Additionally, potential impacts associated with buildout of the Millerton New Town Specific Plan were previously analyzed within an Environmental Impact Report prepared pursuant to CEQA by the County of Fresno (Fresno County, 1984). This document is available for review at the following address during normal business hours (Monday through Friday from 8 am to 5 pm):

County of Fresno
Department of Public Works and Planning
2220 Tulare Street, 6th floor
Fresno, CA 93721
(559) 600-4078

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Section 4 CEQA Environmental Checklist

This section of the EA/IS includes an evaluation of environmental impacts that may result from implementation of the Proposed Project considering environmental factors outlined in the CEQA Guidelines Appendix G Environmental Checklist Form. The CEQA Guidelines state that an initial study 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. References to **Section 3.0** are included where appropriate to avoid duplicative discussion of environmental factors previously considered.

4.1 Discussion of Potentially Affected Environmental Factors

4.1.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock croppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1.1 Affected Environment

Landscape features that define the visual character of the project area are related to a variety of natural features. The lands surrounding the proposed pipeline alignment are dominated by non-native annual grassland with oak trees and rock outcroppings. Topography east and west of the proposed pipeline alignment consists of large rolling hills that impede views in either direction.

4.1.1.2 Environmental Consequences

No Action Alternative

Under the No Action Alternative, the project area would remain undeveloped and no alteration of the visual character would occur. No impacts would result.

Proposed Action

Questions A-C: Scenic Vista, Scenic Highway, Visual Character

Construction related aesthetic impacts, including the use of large sized heavy equipment, would be temporary in nature, as the development of the pipeline would occur along a linear area and construction would not occur in one area over an extended period of time. After construction, the proposed pipeline would not be visible as it will be located underground. Impacts under CEQA associated with effects to scenic vistas, scenic highways, or the visual character of the project area would be considered ***less than significant***.

Question D: Light and Glare

The Proposed Project would not require the installation of any large lighting systems or additional sources of light or glare. Construction activities would occur during the daylight hours and would not require night lighting. If the need for night work is required, the temporary lighting would be directed at the work area and not broadcast over a large area. Temporary lighting would have no effect on nearby residences due to the short duration of lighting. Impacts under CEQA would be ***less than significant***.

Cumulative Impacts

As the buried pipeline would not be visible, the Proposed Project would not alter the visual character of the project area during operation. Therefore, the Proposed Project would not contribute to cumulatively significant impacts associated with aesthetics.

4.1.2 Agricultural and Forest 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 and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

4.1.2.1 Affected Environment

Fresno County is the leading agricultural producing county in the United States, with a gross production value in 2008 of $5,662,895,000 (Fresno, 2008). The majority of the agricultural activities occur in the central and western portions of the County, while the eastern portion consists of the rolling hills of the Sierra Nevada foothills.

The Agriculture and Food Act, which contained the Farmland Protection Policy Act (FPPA) (7 U.S.C. § 4201), was passed in 1981. The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The farmland classification system developed and classified by the Farmland Mapping and Monitoring Program (FMMP) places farmland into 5 specific categories. These categories are based upon available soil surveys and land use data. The proposed pipeline alignment is located in the eastern portion of Fresno County. Lands in the vicinity of the proposed pipeline are classified as either Grazing land or Nonagricultural and Natural Vegetation. Nonagricultural and Natural Vegetation includes heavily wooded, rocky or barren areas, riparian and wetland areas, grassland areas which do not qualify for grazing land due to their size or land management restrictions, small water bodies and recreational water ski lakes (California Department of Conservation [CDC], 2009).

The California Legislature passed 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.” Two parcels of non-prime agricultural land approximately 200 feet west of the proposed pipeline alignment are currently in non-renewal. No other Williamson Act parcels are in the immediate vicinity of the proposed pipeline alignment.

4.1.2.2 Environmental Consequences

No Action

Under the No Action Alternative, no impact to agricultural or forest resources would occur.

Proposed Action

Questions A-C and E: Agricultural Resources

Designated grazing land may be temporarily disturbed due to construction activities related to the Proposed Project. However, these impacts would be temporary in nature. After construction, the proposed pipeline would be located underground and existing adjacent agricultural uses, including grazing, would continue. Therefore, the Proposed Project would not convert agricultural land to non-agricultural use. Impacts to agricultural resources under CEQA are considered ***less than significant.***

The proposed pipeline alignment does not intersect any Williamson Act parcels. Therefore, under CEQA, ***no impact*** to Williamson Act lands would occur.

Question D: Forest Resources

The Proposed Project is not located in an area defined as timber or forest land, nor is the project alignment being used for or zoned for timberland production. Therefore, the Proposed Project will not result in a significant impact on the region's forest resources. Under CEQA, ***no impact*** to forest resources would occur.

Cumulative Impacts

The Proposed Project would not convert any farmland or forest land to non-agricultural/forest use; therefore, the Proposed Project would not contribute to cumulatively significant impacts to agricultural or forest resources.

4.1.3 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:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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 which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

4.1.3.1 Affected Environment

Refer to **Section 3.6.1** for a discussion of the affected environment associated with air quality.

4.1.3.2 Environmental Consequences

No Action

Under the No Action Alternative, no impacts associated with air quality would occur.

Proposed Action

Refer to **Section 3.6.2** for a discussion of the Proposed Project's potential environmental consequences associated with air quality. A brief summary is provided below.

Questions A-C: Air Quality

Construction emissions from grading, trenching, paving, and worker trips were estimated using the 2007 Urban Emissions (URBEMIS) air quality model and compared to the San Joaquin Air Pollution Control District (SJAPCD) CEQA Guidelines thresholds and federal Clean Air Act *de minimis* levels. As shown in **Table 3-4,** construction emissions of reactive organic gases (ROG) and oxides of nitrogen (NOx) from exhaust emissions would not exceed *de minimus* levels or Guidelines thresholds; therefore, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standard or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Potential impacts resulting from construction are considered ***less than significant***.

Operation of the Proposed Project would not result in an increase in maintenance or worker trips over current levels for the existing pipeline; therefore, ***no impact*** to air quality would occur as a result of operation of the Proposed Project

Question D: Sensitive Receptors

Construction activities could generate dust which could impact sensitive receptors. With the implementation of **Mitigation Measure AQ-1** in **Section 3.6.3**, which is required by the SJVAPCD for all construction projects, PM_{10} and $PM_{2.5}$ emissions resulting from construction activities of the Proposed Project would be reduced and impacts to air quality would be ***less than significant with mitigation***.

Question E: Odor

Construction odor is generally not noticeable beyond the boundaries of the project alignment and there are no receptors within 550 feet of the project alignment. Impacts associated with odor are considered ***less than significant***.

Cumulative Impacts

As discussed in **Section 3.6.2.3**, under the SJAPCD CEQA guidelines, a significant cumulative impact would occur if a project exceeds the SJAPCD thresholds of 10 tons per year of ROG or NOx. As shown in **Table 3-4** project emissions of NOx and ROG do not exceed these thresholds. CO and PM_{10} emissions are considered local pollutants, due to the rapid rate at which these pollutants disperse. Due to the distance of the nearest sensitive receptor

(approximately 550 feet) to the pipeline alignment, the project would not expose sensitive receptors to high cumulative concentrations of CO and PM_{10}.

4.1.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional, or state habitat conservation plan?	☐	☐	☐	☒

4.1.4.1 Affected Environment

Refer to **Section 3.3.1** for a discussion of the affected environment associated with biological resources.

4.1.4.2 Environmental Consequences

No Action

Under the No Action Alternative, no impacts biological resources would occur.

Proposed Action

Refer to **Section 3.3.2** for a discussion of the Proposed Project's potential environmental consequences associated with biological resources. A brief summary is provided below.

Question A: Special Status Species

Construction of the Proposed Project could have potential effects on the following special-status species and/or their habitat: California Tiger Salamander (CTS), Western Spadefoot Toad (WST), Pallid Bat, Spotted Bat, American Badger, San Joaquin Kit Fox (SJKF), and migratory birds. Through the implementation of the mitigation measures listed in **Section 3.3.3**, impacts to special-status species under CEQA would be ***less than significant with mitigation***.

Questions B, D, E, and F:Sensitive Habitat, Native and Migratory Fish, local ordinances, and Habitat Conservation Plans

The Proposed Project would have ***no impact*** on any riparian habitat, sensitive natural communities, native resident or migratory fish or wildlife, local policies or ordinances protecting biological resources, or habitat conservation plans because none exist within the proposed action area.

Question C: Wetlands and Waters of the U.S.

Approximately 0.56 miles of the proposed pipeline would be located within the lakebed of Millerton Lake, a designated water of the U.S. as defined by Section 404 of the CWA. Implementation of the Proposed Project would require obtaining a Section 404 permit from the Corps, a Section 401 Water Quality Certification from the RWQCB, and a Streambed Alternation Agreement with the CDFG. Through adherence to the conditions of these permits as listed in **Section 3.3.3**, impacts to waters of the U.S. under CEQA are considered ***less than significant with mitigation***.

Cumulative Impacts

As discussed in **Section 3.3.2.3**, the effects of the Proposed Actions are temporary in nature, and do not contribute to a cumulative direct or indirect loss of sensitive or special-status wildlife

species and their habitat, loss of migratory birds, or conflict with local plans or policies protecting biological resources. The Proposed Actions would not contribute to cumulative impacts to biological resources. No mitigation is required.

4.1.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

4.1.5.1 Cultural Resources

Affected Environment

A discussion of the affected cultural resources environment is provided in **Section 3.4.1.**

Environmental Consequences

No Action

Under the No Action Alternative, no impacts cultural resources would occur.

Proposed Action

A discussion of the Proposed Project's potential environmental consequences associated with cultural resources is provided in **Section 3.4.2**. A brief summary is provided below.

Questions A, B and D: Cultural Resources

No cultural resources were identified within the Proposed Project's area of potential effects (APE). Further, based on soil survey information and geoarchaeology sensitivity studies for the region, the potential for buried archaeological resources in the project area is low to very low (see Meyer et al. 2010). Through the implementation of the mitigation measures listed in

Section 3.4.3 for inadvertent discovery of unknown cultural resources, impacts to cultural resources from the Proposed Project would be ***less than significant***.

Cumulative Impacts

As discussed in **Section 3.4.2.3**, because there are no known cultural resources recorded within the current APE, there will be no cumulative impacts to resources in the immediate Proposed Action area. At present the potential cumulative impacts to cultural resources outside of the current Proposed Action area resulting from possible future water transfers and development within the CSA 34 service area, which may or may not be approved, are unknown. Any such future actions would be expected to undergo appropriate regulatory review as required under local preservation ordinances, CEQA, and/or Section 106 of the NHPA, during which potential impacts to cultural resources would be considered.

4.1.5.2 Paleontological Resources (Question C)

Affected Environment

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 take those resources into consideration when evaluating project impacts. The level of consideration may vary with the importance of the resource in question.

Setting

The presence of paleontological resources at any particular site is influenced by geological composition resulting from formation processes occurring over long periods of time. Fossils typically reside in sedimentary layers, and may or may not become mineralized dependent upon the mineral composition within their depositional environment.

As described in **Section 4.1.6**, the region's geologic history is characterized by volcanic eruptions, tectonic uplift and tilting, and erosion. Locally, the dominant geologic feature is the Sierra Nevada Batholith, a massive Mesozoic-era grano-dioritic structure, which underlies the project area. Within the project area a thin soil mantle is present, which consists mostly of well drained sandy loams and very rocky coarse sandy loams, derived from quartz diorite and granitic alluvium. Significant fossil resources generally do not occur within the very shallow sediments overlying the western edge of the Sierra Nevada batholith, and none are present within the batholith itself.

Several sources were consulted to identify unique geologic formations within the project site. Sources reviewed include: the *California Geotour Index* maintained by the California Geologic Survey (CA Geologic Survey, 2007); *California Landscape* (Hill, 1984); *Roadside Geology of Northern and Central California* (Alt and Hyndman, 2000); and *A Natural History of California* (Schoenherr, 1992). A review of the above-referenced sources did not identify the presence of any unique geologic features within or in close proximity to the project site.

A search of the University of California Museum of Paleontology (UCMP) database indicates that 2,818 paleontological specimens have been reported in Fresno County (UCMP, 2010). Areas along the western edge of the San Joaquin Valley and adjacent southern Coast Range have the highest frequency of fossils in the County. Within Fresno County, the vast majority of fossil specimens have been documented within eight major geologic formations, none of which occur in proximity to the project site. These formations include: Domengine, Etchegoin, Jacalitos, Kreyenhagen, Lodo, Moreno, Santa Margartia, and Temblor (UCMP, 2010). Regionally, significant fossil discoveries have been made within the deep alluvial fans within the San Joaquin Valley. Of particular importance is the Fairmead fossil bed in Madera County, located roughly 30 miles west of the project area. The Fairmead locale, discovered in 1993 at the Madera County Landfill, contains a wide variety of Pleistocene fauna including mammoth, birds, reptiles, and large cats, among others (Dundas et al., 1996).

Environmental Consequences

No Action

Under the No Action Alternative, no impacts paleontological resources would occur.

Proposed Action

Question C: Paleontological Resources

Indicators of significant paleontological resources within the project site and immediate vicinity are absent in the sources consulted, and no such resources were observed in the course of a surface reconnaissance survey by Table Mountain Archaeologists in 2008 and AES in 2010. The geologic formation upon which the project site is located has not produced significant paleontological specimens of scientific consequence and is unlikely to do so in the future. Therefore, potential impacts to paleontological resources are ***less than significant***.

Cumulative Impacts

At present the potential cumulative impacts to paleontological resources outside of the current Proposed Action area resulting from possible future water transfers and development within the CSA 34 service area, which may or may not be approved, are unknown. Any such future actions would be expected to undergo appropriate regulatory review as required under state and local regulations, during which potential impacts to paleontological resources would be considered.

4.1.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known Fault?	☐	☐	☒	☐
b) Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving strong seismic ground shaking?	☐	☐	☒	☐
c) Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
d) Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving landslides?	☐	☐	☒	☐
e) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
f) 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?	☐	☒	☐	☐
g) Be located on expansive soil, as defined in Table 18-1-B of the uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐

h) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

4.1.6.1 Affected Environment

Topography

Topography within the project area consists of gradually rolling hills with elevations ranging from approximately 565 feet to 700 feet.

Seismic Conditions

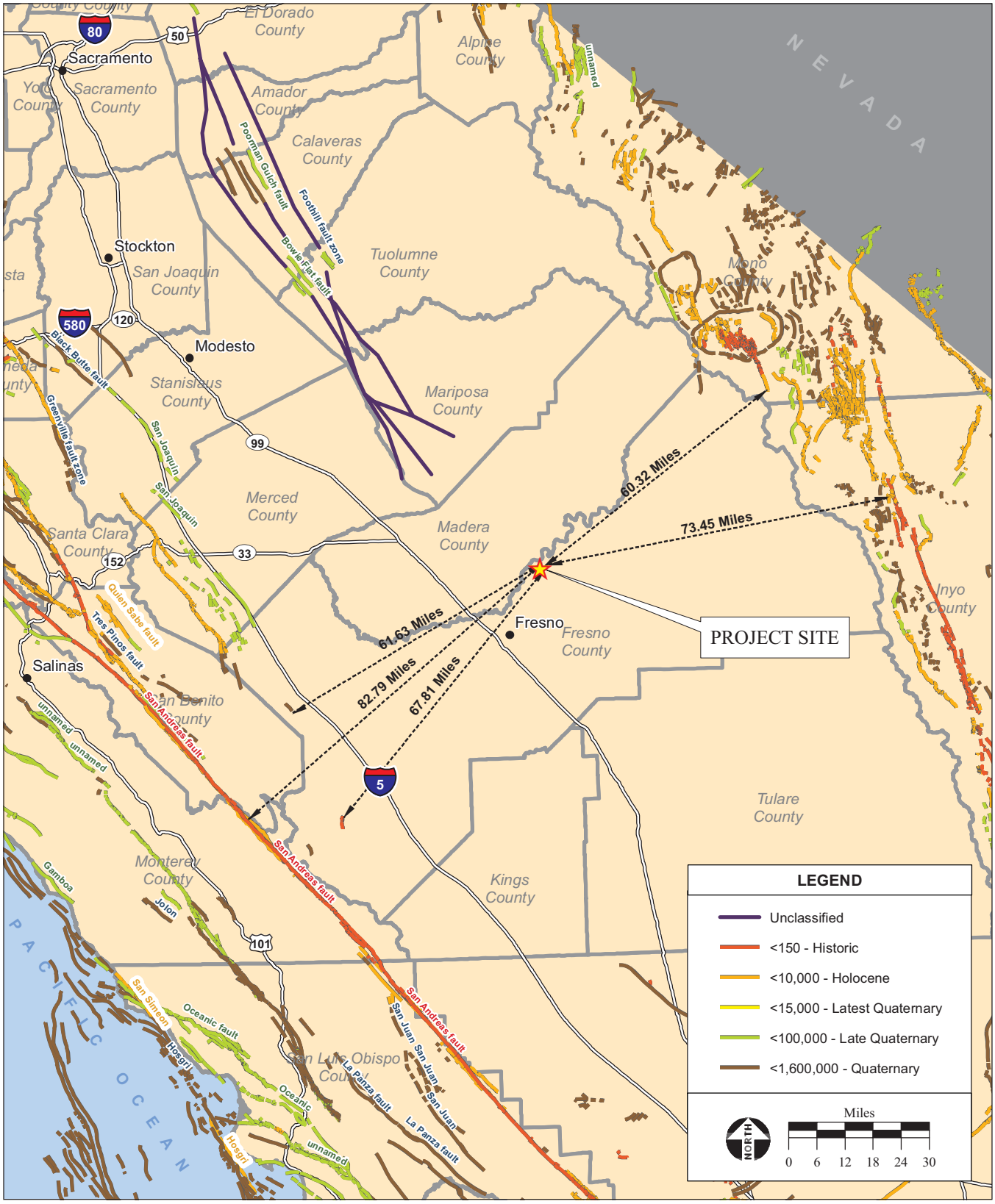
There are several active and potentially active faults in and adjacent to Fresno County. **Figure 9** shows regionally active faults and their relative distances to the proposed pipeline alignment. The Alquist-Priolo Act defines active faults as those that have shown seismic activity within the past 11,000 years. The nearest active faults in the vicinity of the project area are the Owen Valley fault zone located 73.4 miles east (activity within 150 years) and the San Andreas Fault Zone Creeping section (activity within the last 150 years) located 82.8 miles southwest.

The Modified Mercalli intensity (MMI) scale is commonly used to measure earthquake effects due to ground shaking. The MMI values for intensity range from I (earthquake not felt) to XII (damage nearly total). MMI values ranging from IV to X could cause moderate to significant structural damage. The proposed alignment is located within an area of minor potential shaking intensity of MMI level VII. This corresponds to the potential for considerable damage to poorly built or badly designed structures, but negligible damage in buildings of good design and construction (USGS, 1989). This low potential reduces the likelihood of liquefaction within the subject property as discussed in the soil hazards discussion below.

Soil Types and Characteristics

Portions of Fresno County occupy the western slope of the Sierra Nevada which is dominated by granitic rocks associated with the Sierra Nevada batholith. Serpentine, gabbro, and metavolcanic rocks are scattered throughout most of the western slope of the Sierra Nevada, which includes portion of Fresno County. Most of Fresno County is located within the southern portion the Great Central Valley geomorphic province which is a large, elongate, northwest-trending structural trough in the interior of California that has been filled with a thick sequence of sedimentary and non-marine sedimentary rock. These rocks are derived from erosion of the Coast Ranges and the Sierra Nevada over the last 200 million years and form the basement complex beneath the east side of the Central Valley. The project site is located in eastern Fresno County, as such; serpentine, gabbro, and metavolcanic rocks would dominate the project site. These rock formations are most prevalent throughout most of the western slope of the Sierra Nevada.

A soil survey report for the project site is available online through the United States Department of Agriculture (USDA) NRCS (USDA, 2008). Soil types in the vicinity of the Proposed Project alignment were determined using the online NRCS soil survey. The soil survey identifies and



SOURCE: USGS Earthquake Hazards Program, 2007; AES 2010

Figure 9
Regional Fault Map

maps soil units and provides a summary of major physical characteristics and general recommendations based on those soil characteristics. The soil map is provided in **Figure 10** and general soil descriptions are discussed below.

Sesame sandy loam (SkC) is described as a Class C, well-drained soil that occurs mostly along slopes of 9 to 15 percent at elevations of 500 to 2,000 feet above mean sea level (msl). Sesame sandy loam occurs over restrictive layer of paralithic bedrock 20 to 40 inches below surface level (bsl), has a slight susceptibility to sheet and rill erosion, and a moderate risk of corroding steel.

Vista course sandy loam (VfC) is described as a Class C, well-drained soil that occurs mostly along slopes of 9 to 15 percent at elevations of 500 to 2,000 feet above msl. VfC occurs over restrictive layer of paralithic bedrock 20 to 40 inches bsl, has slight susceptibility to sheet and rill erosion and a moderate risk of corroding steel.

Vista very rocky course sandy loam (VID) is described as a Class C, well-drained soil that occurs mostly along slopes of 3 to 30 percent at elevations of 500 to 2,000 feet above msl. VID occurs over restrictive layer of paralithic bedrock 4 to 20 inches bsl, has a moderate susceptibility to sheet and rill erosion, and a moderate risk of corroding steel.

As shown in **Figure 10** and described in **Section 2.0**, the northern portion of the proposed pipeline alignment will be constructed within the lake bed of Millerton Lake. The NRCS soil survey does not provide characteristics for submerged soils at this time. However, as Millerton Lake storage began in 1944, it can be assumed that the upper layer of soils submerged under Millerton Lake consists of sedimentation from upstream and run off from the surrounding areas which as settled to the bottom of the lake over time while underlying soils have a similar composition to surrounding soil types.

Soil Hazards

Soil Erosion

Soil erosion is the wearing and removal of soil materials from the ground surface and the transportation of these soil materials resulting in deposition elsewhere. Mechanisms of soil erosion include natural phenomenon such as storm water runoff and wind, as well as human activities, such as changes in drainage patterns and removal of vegetation. Factors that influence soil erosion include physical properties of the soil, topography (slope), and annual rainfall and peak intensity. The USDA rates the erosion potential of a map unit by taking all of the above into consideration. The ratings range from “Slight” to “Very Severe”. The erosion ratings of the soils in the vicinity of the proposed alignment are included in their descriptions above.

Land Slides

Areas susceptible to land slides are comprised of weak soils on sloping terrain. Landslides can be induced by weather, such as heavy rains, or strong seismic shaking events. According to the USGS Landslides Hazards Program, which documents landslide prone areas throughout the United States, the proposed alignment is located within an area designated as having low landslide probability (USGS, 1982).

SOURCE: USDA NRCS Soil Survey Geographic (SSURGO) database for Eastern Fresno Area County, California, 2000-2008;Aerial Express aerial photograph, 6/15/2007 AES, 2010

Figure 10
Soils Map

Liquefaction

Soil liquefaction can occur during seismic events. When subjected to energy associated with the shaking intensity of a considerably sized earthquake (MMI VIII and above), certain soils when saturated with water may lose their solid structure and act as liquids. Soils comprised of sand and sandy loams, in areas with high groundwater tables or rainfall, are subject to liquefaction. Ground subject to liquefaction may sink or pull apart. Liquefaction may lead to lateral spreading, where slopes even out, changing the topography of the area. Soils along the proposed alignment are classified by the NRCS as well-drained Class C soils that are not overly susceptible to liquefaction. In addition, much of the project area has already been developed, thus the threat of liquefaction occurring along the proposed alignment is considered low.

4.1.6.2 Environmental Consequences

No Action

Under the No Action Alternative, no construction activities would take place, and no impacts to soil resources would occur.

Proposed Action

Questions A-D: Seismic Hazards

The project alignment is not located within a Alquist-Priolo Special Studies or Earthquake Fault Zone. Consequently, the ground rupture, liquefaction, and landslides resulting from strong fault rupture and seismic shaking is considered low.

The proposed pipeline would be designed and constructed in conformance with the IBC Guidelines to avoid or minimize potential damage from seismic shaking on the site. Impacts under CEQA are considered ***less than significant***.

Questions E-G: Soils

Generally, construction activities such as mass grading and excavation increase the risk of sheet and rill erosion and the subsequent loss of topsoil. Construction activities have the potential to result in adverse effects associated with excessive erosion and the resulting loss of top soil. Potential adverse effects would occur if disturbed areas are not stabilized with temporary erosion control measures. Implementation of BMPs for erosion control and a site specific SWPPP for temporary construction impacts would avoid potential adverse effects. The BMPs and SWPPP would be implemented according to the requirements of the NPDES Construction General Permit, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity" (Order No.99-08-DWQ, NPDES No. CAS000002). These measures are included as **Mitigation Measure GS-1** below. Through compliance with the Construction General Permit; preparation of a site specific SWPPP, and incorporation of BMPs, short-term construction impacts under CEQA are considered ***less than significant with mitigation***.

All of the soils within the proposed pipeline alignment have a moderate risk for corroding steel. **Mitigation Measure GS-2** will ensure that underground facilities are designed using durable materials, reducing the potential for damage. Impacts under CEQA are considered ***less than significant with mitigation***.

Question H: Wastewater

The Proposed Project would not include the installation of septic tanks or alternative wastewater disposal systems. Under CEQA, ***no impact*** would occur.

Cumulative Impacts

Construction of other projects in the area would have the potential to contribute to erosion. These impacts are fully mitigable with implementation of construction-period erosion control programs and with standard seismic safety measures incorporated in design. The Proposed Project will incorporate the mitigation measures below to ensure adverse project related effects do not occur; therefore, the Proposed Project would not contribute to cumulative effects associated with geology and soils. Under CEQA, no cumulative impacts would occur.

4.1.6.3 Mitigation

GS-1: To eliminate potential impacts resulting from excessive erosion and loss of topsoil, NPDES Construction General Permit (General Permit) shall be complied with, including implementation of appropriate erosion and sediment control measures. Compliance with the General Permit requires developing a site specific SWPPP that shall identify the location of temporary erosion control features necessary to direct and filter stormwater runoff during construction activities. Temporary erosion control features used during construction may include, but are not limited to, silt fences, fiber rolls, erosion control blankets, temporary sediment basins, and rock bag dams. The SWPPP shall also identify BMPs that would reduce the transportation of pollutants offsite. The SWPPP shall be implemented during the construction and operation of the project. The above mitigation is also included in **Section 3.1.3** (Water Resources). **Mitigation Measure WQ-1** is intended to complement the mitigation presented above.

GS-2: All underground facilities shall be designed using durable materials. All project facilities shall be designed in accordance with the NACE standards for special coatings and/or cathodic protection systems using specific soils data.

4.1.7 Greenhouse Gas Emissions

Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐

4.1.7.1 Affected Environment

Refer to **Section 3.7.1** for a discussion of the affected environment in regards to greenhouse gas emissions.

4.1.7.2 Environmental Consequences

No Action

Under the No Action Alternative, no impacts associated with greenhouse gas emissions would occur.

Proposed Action

Refer to **Section 3.7.2** for a discussion of the Proposed Project's potential environmental consequences associated with greenhouse gas emissions. A brief summary is provided below.

Questions A and B

The Proposed Project would emit an estimated 144.83 tons of carbon dioxide equivalent (CO_2e) during construction. With the implementation of **Mitigation Measure AQ-2** in **Section 3.7.3**, the Proposed Project's GHG emissions would be reduced, consistent with the State and SJVAPCD's GHG reduction goals; therefore, impacts to climate change from project-related GHG emissions would be ***less than significant with mitigation***.

Cumulative Impacts

As discussed in **Section 3.7.2.3**, project emissions of NOx and ROG do not exceed SJVAPCD thresholds and, due to the distance of the nearest sensitive receptor, the project would not expose sensitive receptors to high cumulative concentrations of CO and PM_{10}.

4.1.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

c) Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands	☐	☒	☐	☐

4.1.8.1 Affected Environment

Hazardous wastes sites within the project study area were searched in an effort to identify sites that could affect project construction. Database searches were conducted for records of known storage tank sites and known sites of hazardous materials generation, storage, or contamination (Environmental Data Resources, Inc. [EDR], 2010; **Appendix B**). Databases were searched for sites and listings up to 1 mile from a point roughly equivalent to the center of the proposed pipeline alignment. The environmental database review was accomplished by using the services of a computerized search firm EDR. EDR uses a geographical information system to plot locations of past or previous hazardous materials involvement. AES reviewed the EDR report to determine if the proposed pipeline corridor and properties along the proposed alignment are listed on regulatory agency databases. The database search did not identify any sites within the search radius with known histories of storage and/or use of hazardous materials.

4.1.8.2 Environmental Consequences

No Action

Under the No Action Alternative, no impacts associated with hazards and hazardous materials would occur.

Proposed Action

Question A and B: Hazardous Materials

During construction, limited quantities of miscellaneous hazardous substances such as fuels, solvents, oils, and paint could potentially be used during trenching, jack and bore activities and pipeline installation. If properly used, stored, and disposed of, these materials would not be a hazard to people or the environment. The use of such materials during construction would be considered minimal and would not require these materials to be stored in bulk form. Since hazardous materials would not be stored in bulk form, no impacts are expected regarding potential upset and accidental conditions involving the release of hazardous materials into the environment. As such, the project would not create a significant hazard to the public through the routine use, transport, or disposal of hazardous materials.

Construction contractors are required to implement BMPs for the storage, use, and transportation of hazardous materials. The BMPs would be outlined within a site specific SWPPP that would be required as part of a NPDES Construction General Permit. **Mitigation Measure WR-1** requires the preparation of a SWPPP according to the Construction General Permit. Compliance with the Construction General Permit and implementation of a site specific SWPPP will ensure adverse effects are avoided. Impacts under CEQA are considered ***less than significant with mitigation***.

Question C: Public Health and Safety

The Proposed Project would not result in long-term use or distribution of hazardous material that might create a potential health hazard to the public. The Proposed Project is not within a quarter-mile of existing elementary schools, middle and high schools. Compliance with Federal, State and local hazardous materials laws and regulations would minimize the risk to the public presented by potential hazards. Under CEQA, ***no impacts*** would occur to existing or proposed schools.

Question D: California Government Code 65962.5

The Proposed Project facilities would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The Proposed Project would not create a significant hazard to the public or the environment. Under CEQA, ***no impacts*** would occur.

Question E and F: Airports

The Proposed Project is not located within two miles of a public or private airport. Neither temporary construction activities nor the permanent installation of the pipelines would affect the safe operation of any local airport or result in a safety hazard for people residing or working in the project area; therefore, under CEQA, ***no impacts*** would occur.

Question G: Emergency Plans

Temporary construction activities within Winchell Cove Road would be expected to create temporary delays in traffic. Such delays would be minimized through implementation of a traffic control plan, as recommended by **Mitigation Measure T-1**. With implementation of these measures, the Proposed Project would not have the potential to interfere with an adopted emergency response plan or emergency evacuation plan. Under CEQA, impacts would be considered ***less than significant with mitigation***. Potential traffic impacts are discussed further in the Traffic/Transportation section.

Question H: Fire Hazards

The Proposed Project is located in an area that is susceptible to wildland fires. Operation of the Proposed Project facilities would not present an increased fire hazard. During construction, vehicles and equipment such as welders, torches, and grinders may accidentally spark and ignite vegetation within the study area. The increased risk of fire during the construction of the proposed pipeline alignment would be similar to that found at other construction sites and would be considered potentially significant. **Mitigation Measure HZ-1** will reduce the risk of wildland fires to a less than significant level. Impacts under CEQA would be considered ***less than significant with mitigation***.

Cumulative Impacts

Development of the project in combination with other projects has the potential to increase the risk for accidental release of hazardous materials. Each individual project would require an evaluation as to potential hazardous materials risks and threat to public safety including risks associated with transportation/use/disposal of hazardous materials, accidental release of hazardous materials into the environment, and listed hazardous materials sites that could affect environmental conditions. Each related project would be required to follow local, state, and federal laws pertaining to hazards and hazardous materials. Through compliance with these laws, future potential cumulative impacts would be minimized. Therefore, through full compliance with local, state, and federal laws pertaining to hazardous materials, cumulative impacts would be considered less than significant.

4.1.8.3 Mitigation

HZ-1: The following measures are recommended to decrease the risk of fire during construction of the Proposed Project:

- 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, heavy equipment, and chainsaws.

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

4.1.9 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
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)?	☐	☐	☐	☒
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 that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the 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 that would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐

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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐
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?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

4.1.9.1 Affected Environment

Refer to **Section 3.1.1** for a discussion of the affected environment in regards to hydrology and water quality.

4.1.9.2 Environmental Consequences

No Action

Under the No Action Alternative, no construction activities would take place, and no impacts to hydrology and water quality would occur.

Proposed Action

Refer to **Section 3.1.2** for a discussion of the Proposed Project's potential environmental consequences associated with hydrology and water quality. A brief summary is provided below.

Questions A, E, and F: Surface Water Quality

Construction activities associated with the proposed project could result in temporary changes to on-site drainage patterns, potentially resulting in increased erosion or siltation associated with construction. To mitigate these potential effects, required erosion and pollutant control measures would be employed in compliance with the National Pollution Discharge Elimination System (NPDES) General Construction Permit prior to and throughout construction, as identified in **Mitigation Measure WR-1** listed in **Section 3.1.3**. With implementation of these measures, the potential for adverse effects to surface and ground water quality as a result of construction activities would be reduced. Under CEQA, impacts would be considered ***less than significant with mitigation***.

Question B: Groundwater

The Proposed Project would not deplete groundwater supply nor affect groundwater recharge, ***no impact*** would occur.

Questions C and D: Drainage Patterns

All project features will be located underground, and all surfaces will be graded and restored to existing elevations and conditions after construction is completed; therefore, ***less than significant*** impacts to drainage patterns would occur.

Question G: Flood Hazards on Housing

The Proposed Project would not place housing within a 100-year flood plain, ***no impact*** would occur.

Questions H and I: Flood Hazards

As discussed in **Section 2.0**, the Proposed Project would not increase the quantity of diversion from Millerton Lake beyond that previously approved by Reclamation. Approximately 0.56 miles of the proposed pipeline would be located within the Millerton Lake bed, which is designated as Flood Zone A, subject to inundation by the 100-year flood. However, all project features will be located underground, and all surfaces will be graded and restored to existing elevations and conditions after construction is completed and therefore, impacts to flood plains and from flooding would be ***less than significant***.

Question J: Seiche, Tsunami, and Mudflow

The project area is not subject to a seiche, tsunami, or mudflow; therefore, ***no impacts*** are anticipated to occur.

Cumulative Impacts

As discussed in **Section 3.1.2.3**, the Proposed Action would not result in additional stormwater run-off or contribute to cumulative effects associated with drainage. Similar to the Proposed Action, cumulative development projects would be subject to local, state, and federal regulations designed to minimize cumulative impacts to water resources. Mitigation measures for the Proposed Action in combination with compliance with City, state, and federal regulations, are expected to reduce cumulatively considerable impacts to water quality.

Operation of the Proposed Action would not introduce new impervious surfaces which would result in additional off-site flows; therefore, the Proposed Action would not contribute to cumulative flood related impacts.

4.1.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

4.1.10.1 Affected Environment

Refer to **Section 3.2.1** for a discussion of the affected environment in regards to land use and planning.

4.1.10.2 Environmental Consequences

No Action

Under the No Action Alternative no impacts associated with land use and planning would occur.

Proposed Action

Refer to **Section 3.2.2** for a discussion of the Proposed Project's potential environmental consequences associated with land use and planning. A brief summary is provided below.

Question A: Established Communities

The Proposed Project is underground and, therefore, does not divide an established community and ***no impact*** would occur.

Question B: Land Use Plans

The proposed pipeline alignment would be underground and, therefore, would only have temporary impacts to land use during construction. Impacts regarding consistency with applicable land use plans are considered ***less than significant*** under CEQA.

Question C: Conservation Plans

The Proposed Project would have ***no impact*** on habitat conservation plans because none exist within the proposed action area.

Cumulative Impacts

As discussed in **Section 3.2.2.3**, the proposed pipeline alignment is consistent with the existing zoning, the Fresno County General Plan, the Sierra North Regional Plan, and the Millerton Specific Plan; therefore no adverse cumulative impacts would occur. All ground disturbances would be temporary.

4.1.11 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

4.1.11.1 Affected Environment

Fresno County produces several significant mineral resources including aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction and various industry (asbestos, high-grade clay, diatomite, granite, gypsum and limestone). Several active sand and gravel mining quarries operate along the San Joaquin River. The California Department of Conservation has classified the Fresno Production Consumption (P-C) Region according to the presence of significant Portland cement-concrete (PCC)-grade aggregate deposits. The boundary of the Fresno P-C Region covers an area of approximately 1,400 square miles and is primarily located along the San Joaquin River, beginning southwest of Friant Dam at the Madera and Fresno County line; continuing southwest toward the City of Fresno. The nearest aggregate quarry within the P-C Region is the Friant Road Redimix Plant operated by Vulcan Materials Company. The Friant Road Redimix plant is located approximately 3.5 miles southwest of the Millerton Road and Friant Road intersection in an area classified as a MRZ-2 (Fresno County, 2000b). According to the Fresno County General Plan Background Report (Fresno County, 2000b), the Friant Road Redimix Plant is the nearest active quarry; there are no significant mineral resources present within the proposed pipeline alignment.

4.1.11.2 Environmental Consequences

No Action

Under the No Action Alternative the project area would remain undeveloped and no impacts to mineral resources would occur.

Proposed Action

Questions A and B: Mineral Resources

No significant mineral resources are located in the vicinity of the proposed pipeline alignment; therefore, no affects to mineral resources would result, and ***no impact*** would occur.

Cumulative Impacts

No significant mineral resources are located in the vicinity of the proposed pipeline alignment; therefore, the Proposed Project would not contribute to the cumulatively considerable impacts to mineral resources.

4.1.12 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 or working in the project area to excessive noise	☐	☐	☐	☒

levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.1.12.1 Affected Environment

Ambient Noise Level

The ambient noise level is defined as the existing range of noise levels from all sources near and far. A similar term is background noise level, which usually refers to the ambient noise level that is present when any intermittent noise sources are absent. Noise exposure contours or noise contours are lines drawn about a noise source representing constant levels of noise exposure. Community Noise Equivalent Level (CNEL) or Day-Night Average Sound Level (Ldn) contours are frequently utilized to graphically portray community noise exposure. The CNEL is calculated from hourly Noise Equivalence Level (Leq) values, after adding a "penalty" to the noise levels measured during the evening (7 p.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. The penalty for evening hours is a factor of 3, which is equivalent to 4.77 decibel (dB). The penalty for nighttime hours is a factor of 10, which is equivalent to 10 dB. To calculate the day-night average sound level (Ldn), the evening penalty is omitted. The Leq is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. **Table 4-1** shows typical noise level in the Leq (dBA) designator. The land use surrounding the project site is rural with no commercial uses and limited residential and recreational uses. Ambient noise levels in the project area are estimated to be approximately 55 dBA (refer to **Table 4-1**).

TABLE 4-1
TYPICAL A-WEIGHTED SOUND LEVELS OF COMMON NOISE SOURCES

dBA (Leq)	Description
120	Jet aircraft take-off at 100 feet.
110	Riveting machine at operator's position.
100	Rail Transit at 50 mph
88	Shop tools
80	Rail Transit At-Grade at 50 mph
76	City Bus Idling
75	Food Blender
73	Lawn Mower
63	Cloth Washer
62	Air Conditioner (outdoor)
55	Air Conditioner (indoor), Rural Residential (outdoor)
48	Refrigerator
40	Background level within a residence.
30	Soft whisper at 2 feet.
20	Interior of recording studio.

Source: Federal Transit Administration (FTA), 2006.

Construction Noise

Construction activities generally dominate the noise environment during the construction of a Proposed Project. The primary noise source during construction is from the operation of heavy construction equipment. Typical construction equipment noise levels are shown in **Table 4-2**. Noise from construction attenuates at a rate of 5 to 7.5 dB per doubling of distance (Caltrans, 2009).

TABLE 4-2
TYPICAL NOISE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment Description	Predicted Lmax @ 50 ft (dBA, slow)
All Other Equipment > 5 HP	85
Backhoe	80
Compactor (ground)	80
Dozer	85
Dump Truck	84
Front End Loader	80
Paver	85
Roller	85

Source: FHWA Roadway Construction Noise Model, 2006.

Sensitive Receptors

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses (U.S. DOT, 1995). A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well being could be impaired or endangered by the existence of noise.

The land surrounding the project alignments is primarily uninhabited open space. The proposed pipeline alignment would go through the Millerton Lake Marina located at the northern end of Winchell Cove Road (**Figure 2**, **Section 2.0**). The nearest sensitive receptor to the project alignment is a residence located 450 feet south of Millerton Lake and approximately 550 feet from pipeline, it should be noted that the pipeline is located underwater at this distance. The on-shore distance to this receptor is 1,880 feet. The next closest residence is in the Eagle Springs Golf Course complex and is located 1,950 feet southeast of the proposed pipeline alignment across Millerton Road. No schools or hospitals are located along the proposed pipeline alignment. Construction activity would only occur within 20 feet of the proposed pipeline alignment.

Fresno County Policies

Policy HS-G.6 of the Fresno County General Plan states that the County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance. The County's Noise Ordinance (Ordinance 8.40.060) requires that:

"Noise sources associated with construction shall be exempt from the County's Noise Control Ordinances, provided such activities do not take place before six a.m. or after nine p.m. on any day except Saturday or Sunday, or before seven a.m. or after five p.m. on Saturday or Sunday."

4.1.12.2 Environmental Consequences

No Action

Under the No Action Alternative, the project would not be developed and no noise impacts would occur.

Proposed Action

Question A-D: Noise levels

Noise from construction of the Proposed Project could potentially pose a significant impact to sensitive residential noise receptors near the project site. Noise impacts resulting from construction depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise generating activities; 3) the distance between construction noise sources and noise sensitive receptors; and 4) existing ambient noise levels. Trenching, repaving, and other construction activities would generate maximum noise levels of 85 dBA Leq at a distance of 50 feet from the project site (refer to **Table 4-2**). Using a conservative attenuation factor of 6 dBA per doubling of distance from the project site, the noise level at the nearest sensitive receptor would be 49 dBA, Leq, which is less than the existing noise level of 55 dBA, Leq. Construction of the pipeline would result in less than significant effects associated with increases in ambient noise level.

Once the construction phase of the project is completed, the water pipelines would require periodic maintenance. Maintenance of the pipeline would require approximately 1 truck trip per week. It takes a doubling of traffic volume to audible increase the ambient noise level. No roadway in the project area has a traffic volume of one vehicle per week or less; therefore, the Proposed Project would not increase the ambient noise level. Maintenance of the pipelines may require use of some construction equipment, such as backhoes, trenchers, or hand tools; however, these activities would be temporary and due to the distance of the nearest sensitive receptor to the pipeline alignment, noise from maintenance activities would be less than the existing ambient noise level (refer to Construction analysis above).

Noise levels from construction and operation of the Proposed Project would not exceed noise ordinances or adversely affect the ambient noise level of the surrounding area. Impacts under CEQA would be considered ***less than significant***.

Questions E and F: Airports

The Proposed Project is not located within two miles of a public or private airport. Neither temporary construction activities nor the permanent installation of the pipelines would affect the safe operation of any local airport or result in a safety hazard for people residing or working in the project area; therefore, ***no impacts*** would occur.

Cumulative Impacts

There are no foreseeable construction projects within 1,000 feet of the Proposed Project area, which would occur during the time of project construction; therefore, cumulative construction noise impacts would not occur. Operational activities would not increase the ambient noise under cumulative conditions. During operation the project would add one maintenance vehicle to the roadway, which would not double the vehicle volumes on Winchell Cove or Millerton Road; therefore, the project would not change the cumulative noise environment. This would be a less than significant cumulative impact.

4.1.13 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.1.13.1 Affected Environment

The project site is located within a rural area. Land uses within the project area are guided by the Fresno County General Plan and Millerton New Town Specific Plans.

4.1.13.2 Environmental Consequences

No Action

Under the No Action Alternative, the project area would not be developed and no impact to housing or population would occur.

Proposed Action

Question A: Growth-Inducing

All growth and development regulations within the project area are controlled through the Fresno County General Plan. Implementation of the Proposed Project would not result in a direct increase in population or housing. No affects to population and housing would occur as a result

of the Proposed Project beyond those identified in the General Plan. Under CEQA, ***no impact*** would occur.

Questions B and C: Housing

Implementation of the Proposed Project would not affect or displace existing housing or people. Under CEQA, ***no impact*** would occur.

Cumulative Impacts

Cumulative growth in the region has been addressed in the Fresno County General Plan and Millerton New Town Specific Plan for the project area. The Proposed Project would not increase growth beyond that projected in those plans, therefore no cumulative impacts would occur.

4.1.14 Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

4.1.14.1 Affected Environment

Fire Protection and Emergency Medical Service

The Fresno County Fire Protection District (FCFPD) and the California Department of Forestry and Fire Protection (CalFire) provide primary fire protection and emergency medical services to the project area. Service along Millerton Road is provided by Engine 72, located at the Millerton Fire Station at 4091 E. Millerton Road. As a result of surrounding development, FCFPD and CalFire anticipate the need for a new fire station located within the proposed Millerton New

Town Specific Plan area. Provisions and planning guidelines within the Millerton New Town Specific Plan have been created to provide for this facility.

Emergency medical transport for the project area is provided by American Ambulance, which serves Fresno and Kings Counties. Skylife provides aeromedical transportation to the project area, with air ambulance service located at Fresno International Airport.

The nearest medical center to the proposed pipeline alignment is located at 2755 Herndon Ave, in Clovis. The Clovis Community Medical Center provides a 24-hour emergency, urgent, and critical care center.

Law Enforcement

Public, private, and trust lands surrounding the proposed pipeline alignment are under the jurisdiction of the Fresno County Sheriff's Department. The Area IV patrol district covers the eastern region of Fresno County, with the nearest Sheriff's station located in the town of Auberry, approximately 15 miles south of the proposed pipeline alignment. The California Highway Patrol (CHP) is the chief law enforcement agency for traffic-related issues on public highways and roads. Area offices are located in Madera and Fresno.

Energy Resources

Pacific Gas & Electric (PG&E) provides electrical service to the surrounding region. An easement follows Winchell Cove Road with existing overhead electric facilities along the roadway between Millerton Road and Millerton Lake. The PG&E easement crosses Winchell Cove Road at various locations, at times located to the east or west of the roadway.

Other Public Facilities

The project study area is located within the Sierra Unified School District. The closest schools to the project site are Sierra High School in Tollhouse, Foothill Middle School in Prather, and Auberry Elementary in the town of Auberry. Additionally, located within the community of Friant is the Friant Elementary School (Clovis Unified School District).

4.1.14.2 Environmental Consequences

No Action

Under the No Action Alternative, the project would not be developed, and no impacts to public would occur.

Proposed Action

Question A-E: Public Services

Operation and maintenance activities associated with the Proposed Project would not alter or restrict public service routes, create impacts to area schools and parks, or increase the potential demand for public services in the Fresno County. The proposed pipeline alignment would be built within a public utility easement located within land held in federal trust for the Table Mountain Rancheria, the public right-of-way along Winchell Cove Road, and in accordance with a license agreement with Reclamation within Millerton Lake. Operational activities would not

affect police or fire protection, schools, government services, or public facilities. Under CEQA, ***no impact*** to public services from operation of the Proposed Project would occur.

Cumulative Impacts

The Proposed Project would not contribute to cumulative impacts to public services in the project area.

4.1.15 Recreation

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.1.15.1 Affected Environment

A portion of the project alignment is located within the Millerton Lake State Recreation Area and extends through the Millerton Lake Marina. Millerton Lake Marina, accessed by Winchell Cove Road, provides recreational services through concessions and boat rentals.

4.1.15.2 Environmental Consequences

No Action

Under the No Action Alternative the project area would remain undeveloped and recreational facilities would not be impacted.

Proposed Action

Question A and B: Recreation

As discussed in **Section 4.1.16**, Transportation/Traffic, construction along Winchell Cove Road would be temporary in nature and the County shall ensure, though contractual obligations, that at least one lane on Winchell Cove and Millerton Road is open to through traffic, which would provide uninterrupted access to the Millerton Lake State Recreation Area. Boating activities in the project area may be regulated to maintain a safety buffer around the construction areas. Because the Proposed Project would not increase recreational demand or result in the expansion of recreational facilities, under CEQA, ***no impacts*** to recreational facilities would occur.

Cumulative Impacts

Construction activities within the MLSRA and Millerton Lake Marina would be temporary in nature and not impact recreation in the area; therefore, the Proposed Project would not contribute to cumulative impacts to recreational facilities.

4.1.16 Transportation/Traffic

Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☒	☐	☐

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

4.1.16.1 Affected Environment

The pipeline alignment is located near the community of Friant in Fresno County, which is considered a rural, low-density area. The dominant mode of transportation is by automobile. The roadway network that would be affected by the project is located in the north central portion of Fresno County, near the Madera County border.

Millerton Road is a major east-west route and intersects Winchell Cove Road between Friant and Auberry Roads. Winchell Cove Road extends approximately 1 mile from Millerton Road north to the Millerton Lake Marina at Winchell Cove. Winchell Cove Road is a two lane rural collector road that is used mainly used for accessing Millerton Lake recreation facilities.

4.1.16.2 Environmental Consequences

No Action

Under the No Action Alternative, the project would not be developed and no impact to traffic would occur.

Proposed Action

Question A-F: Transportation/Traffic

A portion of the pipeline alignment would be constructed within the right-of-way of Winchell Cove Road. Construction activities associated with the Proposed Project would have the potential to result in traffic-related impacts associated with construction-related employee trips, heavy equipment deliveries, and construction material importation/exportation. Additionally, trenching and pipeline installation within the Winchell Cove Road right-of-way would temporarily impede traffic flows. Adverse impacts to transportation resulting from the construction would be minimal given the scope of the project, temporary nature of construction, and limited existing traffic in the project area. Implementation of **Mitigation Measure T-1**, listed below, would ensure that a traffic control plan is developed and implemented during construction to reduce potential adverse effects to traffic circulation.

Operational activities would consist of, at most, one vehicle maintenance trip per week on Winchell Cove and Millerton Roads. The addition of one trip per week on these two roads would be less than a one percent increase in traffic volume. The addition of one trip would not substantially increase or affect the existing traffic load and capacity or cause and exceedance of the existing level of service on Winchell Cove or Millerton Roads during operation of the pipeline alignment project. Impacts associated with construction and operational traffic under CEQA would be considered ***less than significant with mitigation***.

Cumulative Impacts

There are no foreseeable construction projects within the Proposed Project area that would occur during the time of project construction; therefore, no cumulative construction traffic impacts would occur.

During operation, the project would add up to one maintenance vehicle trip to area roads. In combination with other traffic on Winchell and Millerton Road, the one maintenance trip would not substantially increase the cumulative traffic load or capacity or decrease the existing level of service on Winchell Cove or Millerton Roads in the cumulative environment.

4.1.16.3 Mitigation

T-1: The County shall ensure, through contractual obligations, that the following measures to reduce or eliminate construction-related traffic impacts are implemented.

- A Traffic Control Plan shall be provided to the County upon submittal of construction drawings. At a minimum, the plan shall identify all construction access and parking areas, temporary pavement markings, and temporary construction signage requirements (e.g., speed limit, temporary loading zones).
- All construction activities within vehicle right-of-ways shall be coordinated with local emergency service providers at least two weeks in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.
- Construction contractors shall ensure that all open trenches at the end of each workday are covered with metal plates to accommodate traffic and access.
- Construction contractors shall ensure that at least one lane on Winchell Cove and Millerton Road is open to through traffic.
- Construction contractors shall implement safety measures (i.e. flag person(s), cones, and signage), consistent with Fresno County and Caltrans guidelines.

4.1.17 Utilities and Service Systems

Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

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 effects?	☐	☐	☒	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste.	☐	☐	☒	☐

4.1.17.1 Affected Environment

As described in **Section 2.0**, the proposed pipeline alignment follows the alignment of the existing water supply line. The project area contains a number of service utility easements along Millerton Road. Ponderosa Telephone Company provides telecommunications to the surrounding region.

4.1.17.2 Environmental Consequences

No Action

Under the No Action Alternative, the project would not be developed, and no impacts to public utilities and service systems would occur.

Proposed Action

Question A-G: Utilities and Service Systems

Construction and operation of the proposed pipeline would not adversely impact water supply or wastewater services in the project area. During construction a small amount of solid waste would be generated, however due to the nature and the temporary timeframe of construction, this waste would not exceed the capacity of the local landfill.

Construction contractors through contractual obligations with the appropriate agency with project approval authority shall notify Underground Service Alert one week prior to the beginning of excavation activities, or within an appropriate timeline so the entire roadway alignment can be properly surveyed in order to minimize the risk of exposing or damaging underground utilities. Impacts under CEQA would be considered ***less than significant.***

Cumulative Impacts

The Proposed Project would not contribute to cumulative impacts to public utilities and service systems in the project area.

4.2 Mandatory Findings of Significance

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

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects)?	☐	☐	☒	☐
c) Does the project have environment effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

With the implementation of mitigation measures identified in the issue area sections discussed in **Sections 3.0** and **4.0**, all potential impacts of the Proposed Project would be reduced to ***less than significant*** levels. Cumulative impacts and indirect effects for each resource area have been considered within the analysis of each resource area (see **Section 3.0**). As discussed in **Section 3.10**, because no off-site mitigation is necessary to minimize the potential effects of the Proposed Project and because the Winchell Cove Pipeline Project is needed under existing conditions to guarantee the capacity originally anticipated for the existing pipeline and, therefore, would not, in itself, have a growth inducing effect on the surrounding community, no analysis of indirect impacts is required under CEQA. The Proposed Project would not result in environment effects that would cause substantial adverse effects on human beings, either directly or indirectly. Refer to **Appendix C** for the CEQA Checklist signature page.

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Section 5 Consultation and Coordination

Several Federal laws, permits, licenses and policy requirements have directed, limited or guided the NEPA analysis and decision making process of this EA/IS.

5.1 Public Review Period

Reclamation and the County intend to concurrently provide the public with an opportunity to comment on the Draft EA/IS during a 30-day review period. Reclamation shall provide the public with an additional opportunity to comment should a FONSI be adopted.

5.2 Fish and Wildlife Coordination Act (16 USC § 661 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The Proposed Action does not involve federal water development projects; therefore, the FWCA does not apply.

5.3 Endangered Species Act (16 USC § 1531 et seq.)

Section 7 of the FESA requires Federal agencies, in consultation with the Secretary of the Interior (Secretary), to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species. The Proposed Action has the potential to affect the CTS through temporary construction activities within critical habitat. Formal consultation with the Service is being conducted for this project.

5.4 National Historic Preservation Act (16 USC § 470 et seq.)

Section 106 of the NHPA requires federal agencies to evaluate the effects of federal undertakings on historical, archaeological, and cultural resources. Because excavation for the Proposed Action will be in previously disturbed areas, the potential for effects on any historical, archaeological, or cultural resources is low. Formal consultation with the State Historic Preservation Officer (SHPO) is being conducted for this project.

5.5 Migratory Bird Treaty Act (16 USC § 703 et seq.)

The MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. Subject to limitations in the Act, the Secretary may adopt

regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting, or exporting of any migratory bird, part, nest, or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits, and migratory flight patterns.

The Proposed Action is not likely to have an effect on birds protected by the MBTA due to timing of construction activities during the fall, outside of the nesting season. In the event that construction occurs within the nesting season, mitigation requires that nesting surveys be conducted, and identified nests be avoided. The Proposed Action will be in compliance with the MBTA.

5.6 Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands

EO 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, EO 11990 places similar requirements for actions in wetlands. The project would not affect floodplains as all project facilities would be located underground and surfaces would be restored to existing conditions, and would have minor, temporary effects on designated waters of the U.S. As described in **Section 3.3.2.2**, the proposed pipeline would be located within the lakebed of Millerton Lake, a designated water of the U.S. as defined by Section 404 of the CWA. Temporary construction activities within the lakebed would require obtaining a Section 404 permit from the Corps and a Section 401 Water Quality Certification from the RWQCB. Adherence to the conditions of these approvals would minimize the potential for impacts to Millerton Lake.

Section 6 List of Preparers and Reviewers

6.1 Lead Agencies

6.1.1 Bureau of Reclamation

Michael T. Inthavong, Natural Resources Specialist, South-Central California Area Office (SCCAO)
Sheryl Carter, Realty Specialist, SCCAO
Shauna McDonald, Wildlife Biologist, SCCAO
Joanne Goodsell, Cultural Resources, MP-153
Patricia Rivera, Indian Trust Assets, MP-400

6.1.2 Fresno County

Frank Fowler, Deputy Director of Public Works and Planning
Willis Robison, Project Manager, Design Division, Public Works and Planning
M. Theresa Acosta-Mena, Senior Planner, Environmental Analysis Unit, Public Works and Planning

6.2 Agencies, Organizations, and Persons Consulted

6.2.1 Federal Agencies

Kellie Berry, U.S. Fish and Wildlife Service
Zachary Simmons, U.S. Army Corps of Engineers

6.2.2 State and Local Government

Jeffrey R. Single, Ph.D., Regional Manager, California Department of Fish and Game
Lisa Gymer, Environmental Scientist, California Department of Fish and Game
Kent Gresham, Acting San Joaquin Sector Superintendent, California State Parks Department
Central Valley Regional Water Quality Control Board

6.3 Environmental Consultants

6.3.1 Analytical Environmental Services

Project Director: David Zweig
Project Manager: Ryan Lee
Technical Staff: Peter Bontadelli, Bibiana Alvarez, Kelly Buja, Melinda McCrary, Erin Quinn, David Sawyer, Anna Elzeftawy
Graphics: Dana Hirschberg, Glenn Mayfield

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APPENDICES

APPENDIX A

BIOLOGICAL RESOURCES INFORMATION
SPECIES LISTS AND SPECIAL STATUS SPECIES TABLE

SPECIAL STATUS SPECIES LISTS

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 110330101830

Database Last Updated: April 29, 2010

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
Critical habitat, vernal pool fairy shrimp (X)
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Mammals

Dipodomys nitratoides exilis
Fresno kangaroo rat (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Orcuttia inaequalis
Critical habitat, San Joaquin Valley Orcutt grass (X)
San Joaquin Valley Orcutt grass (T)

Pseudobahia bahiifolia
Hartweg's golden sunburst (E)

Quads Containing Listed, Proposed or Candidate Species:

FRIANT (378B)
MILLERTON LAKE WEST (398C)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of

a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be June 28, 2011.

CNPS Inventory of Rare and Endangered Plants

Status: Plant Press Manager window with 6 items - Wed, Mar. 30, 2011 12:16 c

- During each visit, we provide you with an empty "Plant Press" for collecting items of interest.
- Several report formats are available. Use the CSV or XML options to download raw data.

Reformat list as: Standard List - with Plant Press controls

DELETE unchecked items check all check none

open	save	scientific	common	family	CNPS
	☑	**Castilleja campestris ssp. succulenta**	succulent owl's-clover	Orobanchaceae	List 1B.2
	☑	**Downingia pusilla**	dwarf downingia	Campanulaceae	List 2.2
	☑	**Eryngium spinosepalum**	spiny-sepaled button-celery	Apiaceae	List 1B.2
	☑	**Leptosiphon serrulatus**	Madera leptosiphon	Polemoniaceae	List 1B.2
	☑	**Orcuttia inaequalis**	San Joaquin Valley Orcutt grass	Poaceae	List 1B.1
	☑	**Pseudobahia bahiifolia**	Hartweg's golden sunburst	Asteraceae	List 1B.1

	Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	***Ambystoma californiense*** California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SC
2	***Antrozous pallidus*** pallid bat	AMACC10010			G5	S3	SC
3	***Branchinecta lynchi*** vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
4	***Branchinecta mesovallensis*** midvalley fairy shrimp	ICBRA03150			G2	S2	
5	***Calicina mesaensis*** Table Mountain harvestman	ILARAU8070			G1	S1	
6	***Castilleja campestris ssp. succulenta*** succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2	S2.2	tB.2
7	***Downingia pusilla*** dwarf downingia	PDCAM060C0			G2	S2	2.2
8	***Emys marmorata*** western pond turtle	ARAAD02030			G3G4	S3	SC
9	***Eryngium spinosepalum*** spiny-sepaled button-celery	PDAPI0Z0Y0			G2	S2.2	1B.2
10	***Euderma maculatum*** spotted bat	AMACC07010			G4	S2S3	SC
11	***Great Valley Mixed Riparian Forest***	CTT61420CA			G2	S2.2	
12	***Leptosiphon serrulatus*** Madera leptosiphon	PDPLM09130			G1?	S1?	1B.2
13	***Linderiella occidentalis*** California linderiella	ICBRA06010			G3	S2S3	
14	***Lytta moesta*** moestan blister beetle	IICOL4C020			G2	S2	
15	***Northern Hardpan Vernal Pool***	CTT44110CA			G3	S3.1	
16	***Orcuttia inaequalis*** San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G2	S2.t	1B.1
17	***Pseudobahia bahiifolia*** Hartweg's golden sunburst	PDAST7P0t0	Endangered	Endangered	G2	S2.1	1B.1
18	***Spea hammondii*** western spadefoot	AAABF02020			G3	S3	SC
19	***Sycamore Alluvial Woodland***	CTT62100CA			G1	S1.1	
20	***Taxidea taxus*** American badger	AMAJF04010			G5	S4	SC
21	***Vulpes macrotis mutica*** San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	

LIST OF SPECIES OBSERVED

WILDLIFE OBSERVED IN THE VICINITY OF THE STUDY AREA

August 4 and 7, 2008 and March 11, 2010

SCIENTIFIC NAME	COMMON NAME
BIRDS	
ACCIPITRIDAE	
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
AEGITHALIDAE	
Psaltriparus minimus	bushtit
ANATIDAE	
Mergus merganser	common merganser
CATHARTIDAE	
Cathartes aura	turkey vulture
COLUMBIDAE	
Zenaida macroura	mourning dove
CORVIDAE	
Aphelocoma californica	western scrub-jay
Corvus corax	common raven
Corvus brachyrhynchos	American crow
EMBERIZIDAE	
Zonotrichia atricapilla	golden-crowned sparrow
ICTERIDAE	
Sturnella neglecta	western meadowlark
MIMIDAE	
Mimus polyglottos	northern mockingbird
PICIDAE	
Melanerpes formicivorus	acorn woodpecker
REGULIDAE	
Regulus calendula	ruby-crowned kinglet
STURNIDAE	
Sturnus vulgaris	European starling
TROCHILIDAE	
Calypte anna	Anna's hummingbird
TURDIDAE	
Sialia mexicana	western bluebird
MAMMALS	
SCIURIDAE	
Spermophilus beecheyi	Beechey ground squirrel

PLANTS OBSERVED IN THE VICINITY OF THE STUDY AREA

Winchell Cove

August 4 and 7, 2008 and March 11, 2010

(*) Asterisk indicates a non-native sp.
(+) Plus indicates cultivated or ornamental sp.

Scientific Name	Common Name
AMARANTHACEAE	**AMARANTH FAMILY**
*Amaranthus albus**	Tumbleweed
ANACARDIACEAE	**SUMAC FAMILY**
Toxicodendron diversilobum	Poison oak
APIACEAE	**CARROT FAMILY**
*Anthriscus caucalis**	Bur chervil
*Conium maculatum**	Poison-hemlock
Daucus pusillus	American wild carrot
Lomatium sp.	Lomatium
ASTERACEAE	**SUNFLOWER FAMILY**
Ambrosia psilostachya	Naked-spike ragweed
Artemisia douglasiana	Mugwort
Baccharis pilularis	Coyote brush
*Carduus pycnocephalus**	Italian thistle
*Centaurea solstitialis**	Yellow star-thistle
*Chamomilla suaveolens**	Pineapple weed
*Cirsium vulgare**	Bull thistle
*Hypochaeris glabra**	Smooth cat's-ear
Lasthenia californica	California goldfields
*Leontodon taraxacoides**	Hairy hawkbit
*Senecio vulgaris**	Common groundsel
*Silybum marianum**	Milk thistle
*Sonchus asper**	Prickly sowthistle
*Sonchus oleraceus**	Common sowthistle
*Taraxacum officinale**	Common dandelion
Xanthium strumarium	Rough cockle-bur
BORAGINACEAE	**BORAGE FAMILY**
Amsinckia menziesii var. *menziesii*	Rancher's fireweed
Amsinckia eastwoodiae	Eastwood's fiddleneck
Iberis amara+*	Candytuft
Plagiobothrys fulvus	Common popcorn flower
Plagiobothrys nothofulvus	Rusty popcorn-flower
Plagiobothrys stipitatus	Slender popcorn-flower
BRASSICACEAE	**MUSTARD FAMILY**
*Brassica rapa**	Field mustard
*Capsella bursa-pastoris**	Shepherd's purse
Cardamine oligosperma	Bittercress
Lepidium nitidum	Pepper grass
*Raphanus sativus**	Purple wild radish
Thysanocarpus curvipes	Fringepod
Thysanocarpus laciniatus	Narrow leaf fringepod
CAPRIFOLIACEAE	**HONEYSUCKEL FAMILY**
*Cerastium glomeratum**	Mouse-ear chickweed

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Winchell Cove

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Spergularia sp.	Sandspurry
*Stellaria media**	Common chickweed
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
*Chenopodium album**	White goosefoot
CONVOLVULACEAE	**MORNING-GLORY FAMILY**
*Convolvulus arvensis**	Morning glory
CRASSULACEAE	**STONECROP FAMILY**
Crassula connata	Sand pygmy-weed
ERICACEAE	**HEATH FAMILY**
Arctostaphylos sp.	Manzanita
EUPHORBIACEAE	**SPURGE FAMILY**
Eremocarpus setigerus	Turkey mullein
FABACEAE	**LEGUME FAMILY**
*Lotus corniculatus**	Birdsfoot trefoil
Lotus humistratus	Short-podded lotus
Lotus scoparius	Deerweed
Lotus wrangelianus	Chilean lotus
Lupinus albifrons	Silver bush lupine
Lupinus bicolor	Bicolored lupine
*Medicago polymorpha**	Bur clover
*Melilotus officinalis**	Yellow sweetclover
Trifolium albopurpureum	Indian clover
*Trifolium dubium**	Shamrock clover
*Trifolium repens**	White clover
*Vicia lathyroides**	Spring vetch
*Vicia villosa**	Winter vetch
FAGACEAE	**OAK FAMILY**
Quercus douglasii	Blue oak
Quercus lobata	Valley oak
Quercus wislizenii	Interior live oak
GERANIACEAE	**GERANIUM FAMILY**
*Erodium botrys**	Filaree
*Erodium cicutarium**	Filaree
*Erodium moschatum**	Filaree
*Geranium dissectum**	Cut-leaved geranium
HYDROPHYLLACEAE	**WATERLEAF FAMILY**
Nemophila menziesii var. *menziesii*	Baby blue eyes
Phacelia cicutoaria	Caterpillar phacelia
Pholistoma membranaceum	White fiesta flower
LAMIACEAE	**MINT FAMILY**
Stachys sp.	Hedge-nettle
LILIACEAE	**LILY FAMILY**
Dichelostemma capitatum	Blue dicks

PLANTS OBSERVED IN THE VICINITY OF THE STUDY AREA

Winchell Cove

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MALVACEAE	**MALLOW FAMILY**
*Malva parviflora**	Cheeseweed
ONAGRACEAE	**EVENING PRIMROSE FAMILY**
Epilobium ciliatum	Hairy willow-herb
OXALIDACEAE	**OXALIS FAMILY**
Oxalis acetosella	Woodsorrel
*Oxalis albicans**	Hairy woodsorrel
PAPAVERACEAE	**POPPY FAMILY**
Eschscholzia californica	California poppy
Eschscholzia lobbii	Frying pan poppy
PINACEAE	**PINE FAMILY**
Pinus sabiniana	Gray pine
PLANTAGINACEAE	**PLANTAIN FAMILY**
Plantago erecta	Plantain
POACEAE	**GRASS FAMILY**
*Aira caryophyllea**	Hairgrass
Alopecurus saccatus	Pacific foxtail
*Avena barbata**	Slender wild oat
*Avena fatua**	Wild oat
*Briza minor**	Little quaking grass
*Bromus diandrus**	Ripgut brome
*Bromus hordeaceus**	Soft brome
*Bromus madritensis ssp. rubens**	Red brome
*Bromus tectorum**	Cheatgrass
*Cynodon dactylon**	Bermuda grass
*Dactylis glomerata**	Orchard grass
Festuca sp.	Fescue
*Hordeum marinum**	Mediterranean barley
*Lolium multiflorum**	Ryegrass
*Poa annua**	Annual bluegrass
Poa sp.	Bluegrass
*Polypogon interruptus**	Beard grass
*Polypogon monspeliensis**	Annual rabbit-foot grass
*Taeniatherum caput-medusae**	Medusahead grass
Vulpia microstachys	Vulpia
Vulpia myuros var. *hirsuta**	Rat-tail vulpia
POLEMONIACEAE	**PHLOX FAMILY**
Linanthus ciliatus	Whiskerbrush
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum sp.	Buckwheat
*Polygonum arenastrum**	Prostrate knotweed
*Rumex crispus**	Curly dock
Rumex sp.	Dock

PLANTS OBSERVED IN THE VICINITY OF THE STUDY AREA

Winchell Cove

August 4 and 7, 2008 and March 11, 2010

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PORTULACEAE	**PURSLANE FAMILY**
Calandrinia ciliata	Red maids
Claytonia perfoliata	Miner's lettuce
PRIMULACEAE	**PRIMROSE FAMILY**
Dodecantheon	*Shooting Star*
PTERIDACEAE	**BRAKE FAMILY**
Pellaea mucronata var. *mucronata*	Bird's foot fern
Pentagramma triangularis	Goldenback fern
RHAMNACEAE	**BUCKTHORN FAMILY**
Ceanothus cuneatus	Buck brush
Rhamnus tomentella ssp. *tomentella*	Hoary coffeeberry
ROSACEAE	**ROSE FAMILY**
*Rubus armeniacus**	Himalayan blackberry
Rubus ursinus	California blackberry
RUBIACEAE	**MADDER FAMILY**
Galium aparine	Goose grass
SALICACEAE	**WILLOW FAMILY**
Populus fremontii	Fremont's cottonwood
Salix exigua	Sandbar willow
Salix laevigata	Red willow
Salix sp.	Willow
SAXIFRAGACEAE	**SAXIFRAGE FAMILY**
Saxifraga californica	Foothill saxifrage
SCROPHULARIACEAE	**FIGWORT FAMILY**
Mimulus guttatus	Common large monkey flower
Mimulus floribundus	Many-flowered monkey flower
SOLANACEAE	**NIGHTSHADE FAMILY**
Solanum sp.	Nightshade
URTICACEAE	**NETTLE FAMILY**
Urtica dioica	Stinging nettle
VISCACEAE	**MISTLETOE FAMILY**
Phoradendron villosum	Oak mistletoe

SPECIAL STATUS SPECIES TABLE

APPENDIX A
FEDERAL, STATE, AND CNPS POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Plants					
Castilleja campestris ssp. *succulent* Succulent owl's clover	FT,CH/CE/1B	Known from Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties (CNPS 2011).	Hemiparasitic annual herb found in vernal pools, which is often acidic, from 50 to 750 meters (CNPS 2011).	April to May	Although the proposed action area does not provide habitat for this species, habitat may occur in the vicinity of the proposed action area. See text.
Downingia pusilla dwarf downingia	–/–/2	Known from Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties. Also occurs in South America (CNPS 2011).	Found in Valley and foothill grassland (mesic) and vernal pools from 1 to 445 meters (CNPS 2011).	March through May	Yes. See text.
Eryngium spinosepalum Spiny-sepaled button-celery	–/–/1B	Known from Fresno, Madera, Merced, Stanislaus, Tulare, and Toulumne counties (CNPS 2011)..	Found in Valley and foothill grassland and vernal pools from 80 to 255 meters (CNPS 2011).	April through May	Although the proposed action area does not provide habitat for this species, habitat may occur in the vicinity of the proposed action area. See text.
Leptosiphon serrulatus Madera leptosiphon	–/–/1B.2	Known from Fresno, Kern, Madera, Mariposa, and Tulare counties (CNPS 2011).	Found in cismontane woodland and lower montane coniferous forest from 300 to 1,300 meters (CNPS 2011).	April through May	Yes. See text.
Orcuttia inaequalis San Joaquin Valley Orcutt grass	FT,CH/CE/1B	Known to occur in Fresno, Madera, Merced, Solano, Stanislaus, and Tulare counties (CNPS 2011).	Annual herb found in vernal pools from 10 to 755 meters (CNPS 2011).	April to September	Although the proposed action area does not provide habitat for this species, habitat may occur in the vicinity of the proposed action area. See text.
Pseudobahia bahiifolia Hartweg's golden sunburst	FE/CE/1B	Known to occur in El Dorado, Fresno, Madera, Merced, Stanislaus, Tuolumne, and Yuba counties (CNPS 2011).	Annual shrub found in cismontane woodland and Valley and foothill grassland on clay, which is often acidic, from 15 to 150 meters (CNPS 2011).	March to April	Yes. See text.
Animals					
Invertebrates					
Branchinecta conservatio Conservancy fairy shrimp	FE	Known from a few isolated populations distributed over a large	Found in ephemeral wetland habitats and vernal pools that fill by winter and	Wet season: November to April	See text.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		portion of California's Central Valley and in southern California including Glenn, Merced, Solano, Stanislaus, and Tehama, counties (Eriksen and Belk 1999).	hold water until June on clay, volcanic, and alluvial soils within grassland communities from 5 to 145 meters (Eriksen and Belk 1999).	(adults) Dry season: May-October (cysts) (Eriksen and Belk, 1999)	
Branchinecta lynchi Vernal pool fairy shrimp	FT,CH/–/–	Known from Shasta County south through the Central Valley to Riverside County in the South Coast Mountains Region (Eriksen and Belk 1999).	Found commonly in a small swale earth slump or basalt-flow depression basin with grassy or muddy bottom in unplowed grassland from 10 to 290 meters in the Central Valley and up to 1,159 meters in the South Coast Mountains Region (Eriksen and Belk 1999).	Wet season: December to May (adults) Dry season: June-November (cysts) (Eriksen and Belk, 1999)	Although the proposed action area does not provide habitat for this species, it occurs within critical habitat. See text.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	Known from Amador, Butte, Calaveras, Colusa, El Dorado, Fresno, Glenn, Kern, Madera, Mariposa, Merced, Napa, Placer, Fresno, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties (NatureServe 2009).	Found in riparian forest communities from 0 to 762 meters. Exclusive host plant is elderberry (*Sambucus* species), which must have stems at least one inch in diameter for the beetle.	Year round	No. The proposed action area does not provide habitat for this species.
Fishes					
Hypomesus transpacificus Delta smelt	FT/CT/–	Known almost exclusively in the Fresno-San Joaquin estuary, from the Suisun Bay upstream through the Delta in Contra Costa, Fresno, San Joaquin, Solano, and Yolo counties. May also occur in the San Francisco Bay (Moyle 2002).	Found in estuarine waters. Majority of life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta (Moyle 2002).	Consult Agency	No. The proposed action area does not provide habitat for this species.
Oncorhynchus mykiss steelhead Central Valley Steelhead	FT/–/–	Spawn in the Fresno and San Joaquin rivers and tributaries before migrating to the Delta and Bay Area (Moyle 2002). This species does not occur in Millerton Lake.	Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. The species requires cold water and gravelly streambed to successfully breed (Moyle 2002).	Consult Agency	No. The proposed action area occurs outside of the geographical range for this species.
Amphibians					
Ambystoma californiense California tiger salamander Central population	FT, CH/CT/–	Known from Alameda, Butte, Contra Costa, Fresno, Glenn, Kern, Madera, Merced, Monterey, Fresno, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara,	Found in grassland, oak savannah, edges of mixed woodland, and lower elevation coniferous forest. Breeds in temporary ponds that form during winter and may dry out in summer (Stebbins	November to March (breeding) June to August (non-breeding)	Yes. The proposed action area provides upland habitat for this species. See text.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
		Santa Clara, Solano, Sonoma, Stanislaus, Tulare, and Yolo counties (Californiaherps 2008). The Central population range excludes CTS populations in Santa Barbara and Sonoma counties.	2003).		
Rana aurora draytonii California red-legged frog	FT/CSC/--	Known along the Coast from Mendocino County to Baja California, and inland through the northern Fresno Valley into the foothills of the Sierra Nevada mountains, south to eastern Tulare County, and possibly eastern Kern County. Currently accepted range excludes the Central Valley (USFWS 1994).	Found in permanent and temporary pools of streams, marshes, and ponds with dense grassy and/or shrubby vegetation from 0 to 1,500 meters (NatureServe 2009).	November to June	No. The proposed action area is outside of the geographical range for this species.
Spea hammondi Western spadefoot toad	--/CSC/--	Known from Redding, throughout the Central Valley and adjacent foothills, south along the coast range from Point Conception into northern Baja California.	Found in and around shallow and temporary pools formed from heavy winter rains during the breeding season. Otherwise spends most of its time in burrows from 0 to 1,363 meters.	All year	Yes. See text.
Reptiles					
Actinemys marmorata Western pond turtle	--/CSC/--	Known throughout California west of the Sierra-Cascade crest. Absent from desert regions except along the Mohave River and its tributaries.	Found in permanent ponds, lakes, streams, irrigation ditches, permanent pools and along intermittent streams. Requires aquatic habitats with suitable basking sites. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks. Found from 0 to 1,430 meters.	All year	No. The proposed action area does not contain habitat for this species.
Gambelia sila Blunt-nosed leopard lizard	FE/--/--	Known from the San Joaquin Valley and nearby valleys and foothills, from extreme northwest Santa Barbara County and western Kern County north to southern Merced County (CDFG 2003).	Found in sparsely vegetated alkali and desert scrub habitat, in areas of low topographic relief. Seeks cover in mammal burrow, under shrubs, or structures including fence posts. Do not excavate their own burrows (CDFG 2003).	Year round	No. The proposed action area is outside of the geographical range for this species.
Thamnophis gigas giant garter snake	FT/CT/--	Known from Butte, Colusa, Contra Costa, Fresno, Glenn, Kern, Madera, Merced, Fresno, San Joaquin, Solano, Sutter, Yolo, and Yuba counties (Stebbins 2003).	Found in agricultural wetlands, irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Requires water during its active season (early spring through mid-fall) to provide food and cover,	March to October	No. The proposed action area does not contain habitat for this species.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
			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 flood elevations when dormant.		
Birds					
Buteo swainsoni 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	Yes. See text.
Mammals					
Antrozous pallidus pallid bat	--/CSC/--	Found throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou cos. to northern Mendocino County.	Habitats occupied include grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests from 0 to 2,000 meters. The species is most common in open, dry habitats with rocky areas for roosting. Roosts also include cliffs, abandoned buildings, bird boxes, and under bridges.	All Year	Yes. See text.
Dipodomys nitratoides exilis Fresno kangaroo rat	FE/--/--	Known currently within the Alkali Sink Ecological Reserve in Fresno County, California (Chesemore and Rhodehamel 1992).	Recently, only been found in alkali sink communities from 61 to 92 meters (Chesemore and Rhodehamel 1992).	Year round	No. The proposed action area does not contain habitat for this species.
Euderma maculatum Spotted bat	--/CSC/--	Known from southern California.	Found in mostly in foothills, mountains and desert regions with vegetation types ranging from desert to sub-alpine meadows including desert scrub, pinyon juniper woodland, ponderosa pine, mixed conifer forest, canyon bottoms, rim of cliffs, riparian areas, fields, and open grassland from 0 to 3,000 meters.	All year	Yes. See text.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION	POTENTIAL TO OCCUR ON-SITE
Taxidea taxus American badger	–/CSC/–	Found throughout most of California except in the northern North Coast.	Suitable habitat occurs in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers are generally associated with treeless regions, prairies, parklands, and cold desert areas. Cultivated lands have been reported to provide little usable habitat for this species.	All Year	Yes. See text.
Vulpes macrotis mutica San Joaquin kit fox	FE/CT/–	Known from Contra Costa and Stanislaus counties south to Kern County (USFWS 2008).	Found in alkali sink, valley grassland, foothill woodland. Hunts in areas with low sparse vegetation that allows good visibility and mobility. Pupping dens are built in loosely textured soils from 110 to 900 meters (Morrell 1972).	Year round	Yes. See text.

STATUS CODES

FEDERAL: United States Fish and Wildlife Service
FE Federally Endangered
FT Federally Threatened
FC Federal Candidate for Listing

STATE: California Department of Fish and Game
CE California Listed Endangered
CR California Listed Rare
CT California Listed Threatened
CSC California Species of Special Concern
CFP California Fully-Protected

CNPS: California Native Plant Society
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 Plants About Which We Need More Information- A Review List

SOURCE: USFWS, 2010; CDFG, 2003; CNPS 2011

APPENDIX B

HAZARDOUS MATERIALS INFORMATION

Winchell Cove Road
7020 Millerton Road
Friant, CA 93626

Inquiry Number: 2724646.1s
March 18, 2010

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

7020 MILLERTON ROAD
FRIANT, CA 93626

COORDINATES

Latitude (North):	36.990600 - 36˚ 59' 26.2''
Longitude (West):	119.657900 - 119˚ 39' 28.4''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	263452.0
UTM Y (Meters):	4096929.0
Elevation:	676 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	36119-H6 FRIANT, CA
Most Recent Revision:	1964
North Map:	37119-A6 MILLERTON LAKE WEST, CA
Most Recent Revision:	1981

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

EXECUTIVE SUMMARY

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
SLIC..... Statewide SLIC Cases
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities

EXECUTIVE SUMMARY

INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ..... Facility Inventory Database
SWEEPS UST ..... SWEEPS UST Listing

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LUCIS ..... Land Use Control Information System
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen ..... RCRA - Non Generators

EXECUTIVE SUMMARY

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN	Bond Expenditure Plan
CA WDS	Waste Discharge System
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site List
Fresno Co. CUPA	CUPA Resources List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
PROC	Certified Processors Database
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
COAL ASH DOE	Sleam-Electric Plan Operation Data
MWMP	Medical Waste Management Program Listing
PCB TRANSFORMER	PCB Transformer Registration Database
FINANCIAL ASSURANCE	Financial Assurance Information Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

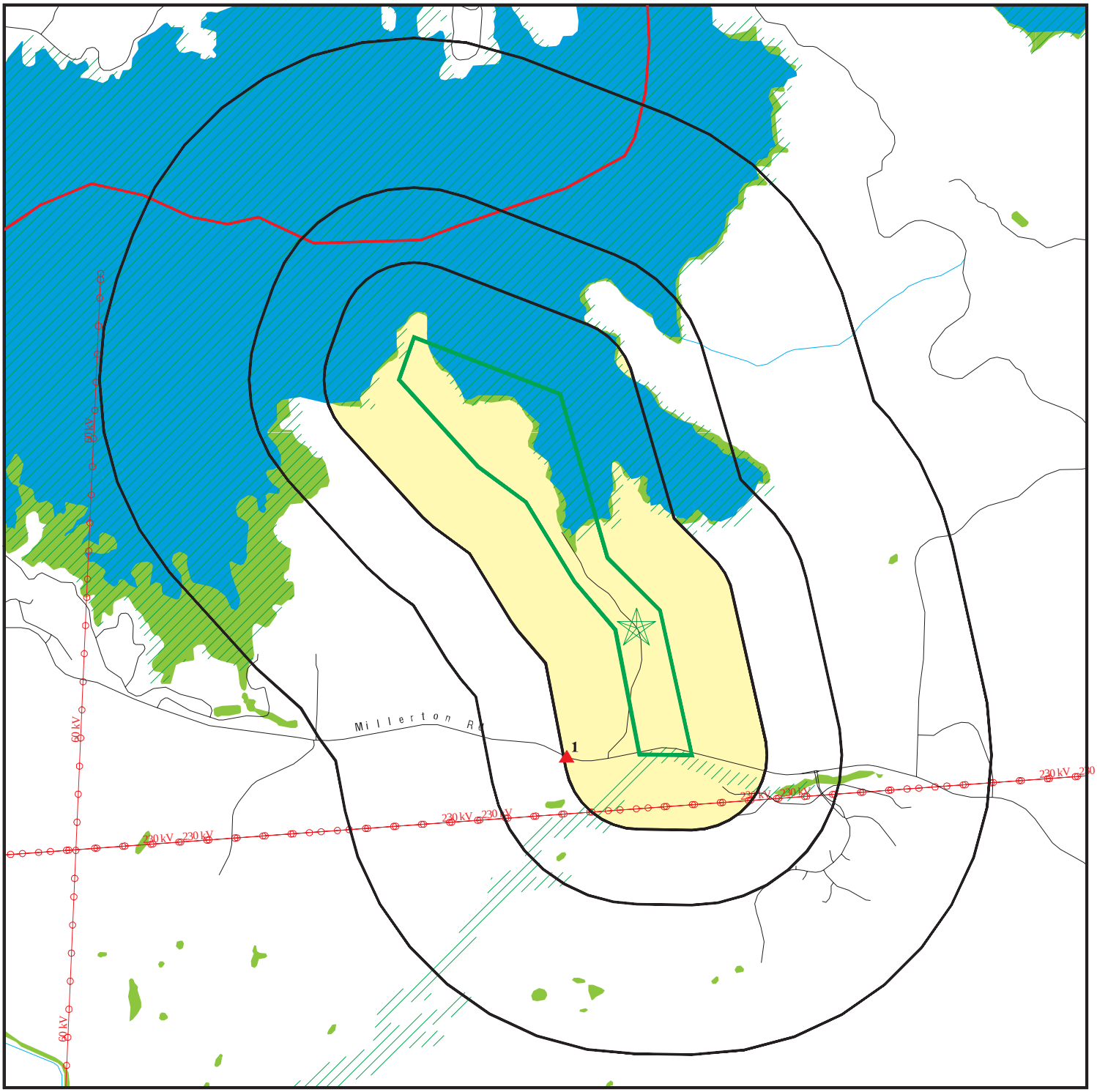
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MILLERTON LAKE SRA-NORTH SHORE	5290 MILLERTON ROAD	W 1/8 - 1/4 (0.239 mi.)	1	8

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
MILLERTON F.F.S.	SWEEPS UST
VERIZON WIRELESS - FRIANT	Fresno Co. CUPA
MILLERTON LAKE STATE REC AREA	Fresno Co. CUPA
MILLERTON FIRE STATION-CDF	Fresno Co. CUPA
R V JENSEN	Fresno Co. CUPA
MILLERTON LAKE MARINA	Fresno Co. CUPA
FRIANT & PARKER RD CORNER S	CERC-NFRAP
MILLERTON LAKE STATE REC AREA	AST

OVERVIEW MAP - 2724646.1s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

SITE NAME: Winchell Cove Road ADDRESS: 7020 Millerton Road Friant CA 93626 LAT/LONG: 36.9906 / 119.6579	CLIENT: Analytical Environmental Serv. CONTACT: Bibiana Alvarez INQUIRY #: 2724646.1s DATE: March 18, 2010 6:34 pm

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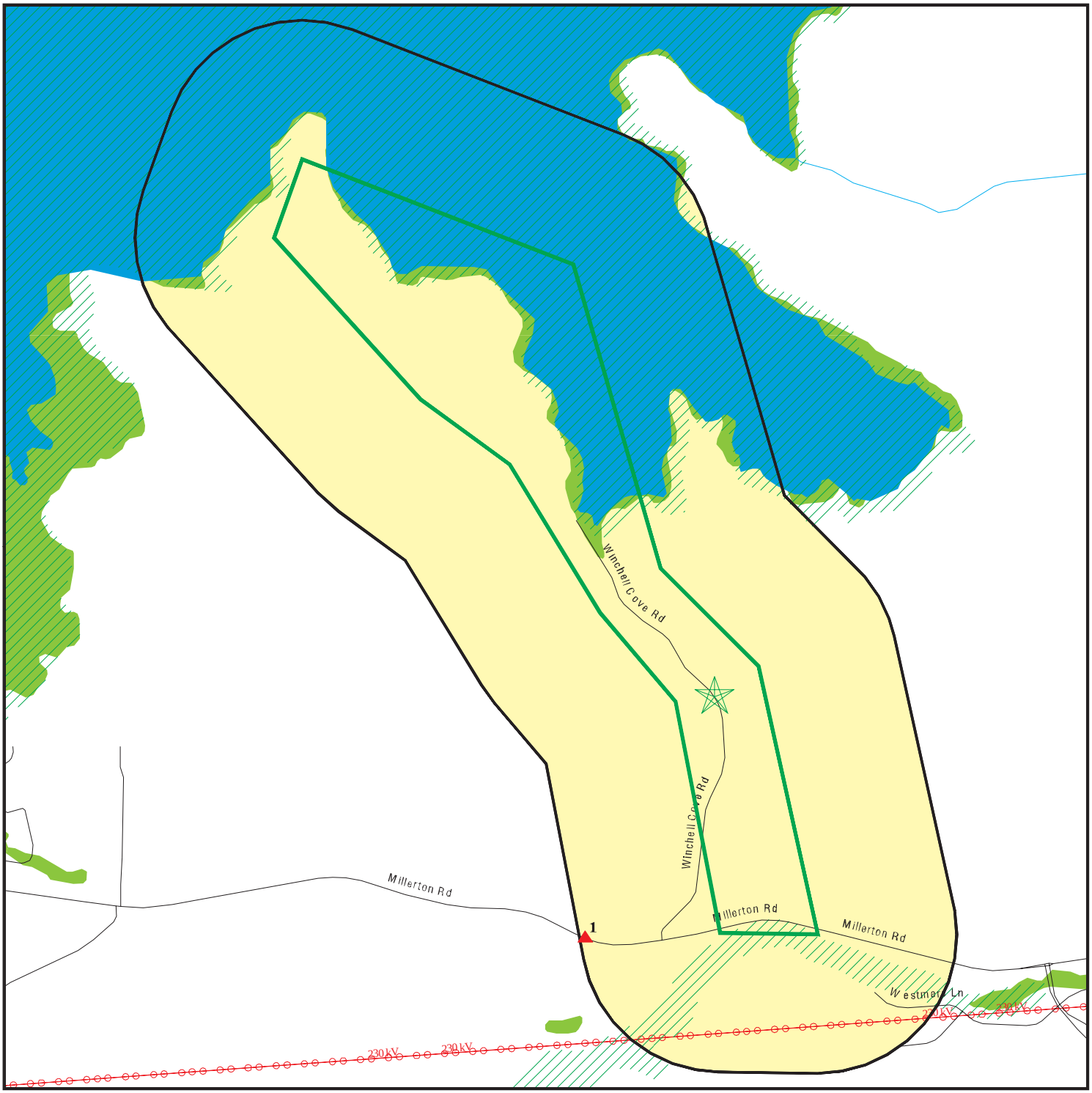
DETAIL MAP - 2724646.1s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

0 1/4 1/2 1 Miles

SITE NAME: Winchell Cove Road ADDRESS: 7020 Millerton Road Friant CA 93626 LAT/LONG: 36.9906 / 119.6579	CLIENT: Analytical Environmental Serv. CONTACT: Bibiana Alvarez INQUIRY #: 2724646.1s DATE: March 18, 2010 6:34 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
FEDERAL FACILITY		1.000	0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	0	0	0	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	1	NR	NR	NR	1
SWEEPS UST		0.250	0	0	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
LDS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	0	NR	NR	0
Fresno Co. CUPA		0.250	0	0	NR	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PROC		0.500	0	0	0	NR	NR	0
HWP		1.000	0	0	0	0	NR	0
HWT		0.250	0	0	NR	NR	NR	0
COAL ASH EPA		0.500	0	0	0	NR	NR	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
MWMP		0.250	0	0	NR	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
West
1/8-1/4
0.239 mi.
1264 ft.

MILLERTON LAKE SRA-NORTH SHORE
5290 MILLERTON ROAD
FRIANT, CA 93626

HIST UST

U001588388
N/A

Relative:
Higher

Actual:
681 ft.

HIST UST:

Region:	STATE
Facility ID:	00000060876
Facility Type:	Other
Other Type:	STATE PARK
Total Tanks:	0003
Contact Name:	HARVEY CLARK
Telephone:	2098222332
Owner Name:	DEPARTMENT OF PARKS AND RECREA
Owner Address:	P.O. BOX 205
Owner City,St,Zip:	FRIANT, CA 93623
Tank Num:	001
Container Num:	#1
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	#2
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Tank Construction:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	#3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Tank Construction:	Not reported
Leak Detection:	Stock Inventor

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FRESNO	S108277087	VERIZON WIRELESS - FRIANT	MILLERTON	93626	Fresno Co. CUPA
FRIANT	1003879047		FRIANT & PARKER RD CORNER S	93626	CERC-NFRAP
FRIANT	S105036085	MILLERTON LAKE STATE REC AREA	5290 MILLERTON RD	93626	Fresno Co. CUPA
FRIANT	S106175844	MILLERTON FIRE STATION-CDF	4091 E MILLERTON	93626	Fresno Co. CUPA
FRIANT	S104870196	R V JENSEN	MILLERTON	93626	Fresno Co. CUPA
FRIANT	A100338571	MILLERTON LAKE STATE REC AREA	5290 MILLERTON RD	93626	AST
FRIANT	S106929427	MILLERTON F.F.S.	4091 MILLERTON RD	93626	SWEEPS UST
FRIANT	S104871743	MILLERTON LAKE MARINA	19305 WINCHELL COVE	93626	Fresno Co. CUPA

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 01/14/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 03/03/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 01/14/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 35

Source: EPA
Telephone: N/A
Last EDR Contact: 03/03/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/01/2009	Source: EPA
Date Data Arrived at EDR: 01/14/2010	Telephone: N/A
Date Made Active in Reports: 02/18/2010	Last EDR Contact: 03/03/2010
Number of Days to Update: 35	Next Scheduled EDR Contact: 04/26/2010
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/30/2009	Source: EPA
Date Data Arrived at EDR: 08/11/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 02/09/2010
Number of Days to Update: 41	Next Scheduled EDR Contact: 04/12/2010
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of NPL and Base Realighnment & Closure sites found in the CERCLIS database where FERRO is involved in cleanup projects.

Date of Government Version: 06/23/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/15/2010	Telephone: 703-603-8704
Date Made Active in Reports: 02/10/2010	Last EDR Contact: 01/15/2010
Number of Days to Update: 26	Next Scheduled EDR Contact: 04/26/2010
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009	Source: EPA
Date Data Arrived at EDR: 09/02/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 03/11/2010
Number of Days to Update: 19	Next Scheduled EDR Contact: 06/14/2010
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/11/2009	Source: EPA
Date Data Arrived at EDR: 12/29/2009	Telephone: 800-424-9346
Date Made Active in Reports: 02/10/2010	Last EDR Contact: 02/15/2010
Number of Days to Update: 43	Next Scheduled EDR Contact: 05/31/2010
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 01/13/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 02/19/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 01/13/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 02/19/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 01/13/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 02/19/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 01/13/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 02/19/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 10/09/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 10/09/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/22/2010
Date Made Active in Reports: 02/11/2010
Number of Days to Update: 20

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/15/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/22/2010
Date Data Arrived at EDR: 02/24/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 8

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/24/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 12/23/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 02/12/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 12/18/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/05/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 13

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 02/05/2010
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/05/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 13

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/05/2010
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 12/18/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 12/10/2009
Next Scheduled EDR Contact: 03/29/2010
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 02/15/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 02/08/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/02/2010
Date Data Arrived at EDR: 02/03/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 15

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 15

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/12/2009
Date Data Arrived at EDR: 11/12/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 12/07/2009
Date Data Arrived at EDR: 12/09/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 7

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 11/24/2009
Date Data Arrived at EDR: 11/25/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 28

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

State and tribal registered storage tank lists

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/05/2010
Date Made Active in Reports: 02/23/2010
Number of Days to Update: 18

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 02/05/2010
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 01/11/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/02/2010
Date Data Arrived at EDR: 02/03/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 15

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/17/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/12/2009
Date Data Arrived at EDR: 11/20/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 26

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 15

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2009
Date Data Arrived at EDR: 11/05/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 41

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 12/07/2009
Date Data Arrived at EDR: 12/09/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 7

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 10/29/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 48

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 02/22/2010
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 11/04/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 01/07/2010
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/18/2009
Date Data Arrived at EDR: 12/21/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 28

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/21/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 01/11/2010
Date Data Arrived at EDR: 01/12/2010
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 6

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/08/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/19/2009
Date Data Arrived at EDR: 12/29/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/14/2009
Next Scheduled EDR Contact: 03/22/2010
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing
Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 11/03/2009
Date Data Arrived at EDR: 11/05/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 41

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 03/17/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Varies

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 01/28/2010
Date Data Arrived at EDR: 01/29/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/15/2009
Date Data Arrived at EDR: 12/15/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/06/2010
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 05/09/2008
Date Made Active in Reports: 06/20/2008
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/05/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 13

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/05/2010
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/05/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 13

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 02/05/2010
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 01/13/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 02/19/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 10/13/2009
Date Data Arrived at EDR: 11/10/2009
Date Made Active in Reports: 12/16/2009
Number of Days to Update: 36

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 01/19/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/30/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 62

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/18/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 08/03/2009
Date Data Arrived at EDR: 10/27/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 13

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/01/2009
Date Data Arrived at EDR: 12/15/2009
Date Made Active in Reports: 01/19/2010
Number of Days to Update: 35

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/17/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 01/21/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/17/2009
Date Data Arrived at EDR: 12/08/2009
Date Made Active in Reports: 01/19/2010
Number of Days to Update: 42

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/10/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 03/02/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 01/20/2010
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/10/2009
Date Data Arrived at EDR: 11/18/2009
Date Made Active in Reports: 01/19/2010
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 12/23/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/01/2009
Date Data Arrived at EDR: 10/21/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 41

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 02/16/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 12/24/2009
Date Data Arrived at EDR: 12/31/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 41

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 28

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/13/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/19/2009
Date Data Arrived at EDR: 10/22/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 40

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 92

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/25/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Quarterly

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/22/2010
Date Data Arrived at EDR: 02/24/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 8

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/24/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 01/06/2010
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 12

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 01/06/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/23/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/22/2009
Date Data Arrived at EDR: 01/25/2010
Date Made Active in Reports: 01/29/2010
Number of Days to Update: 4

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/07/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 10/21/2009
Date Made Active in Reports: 10/28/2009
Number of Days to Update: 7

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/21/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 07/14/2009
Date Made Active in Reports: 07/23/2009
Number of Days to Update: 9

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 01/06/2010
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/19/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 11/16/2009
Date Data Arrived at EDR: 11/16/2009
Date Made Active in Reports: 01/19/2010
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/08/2010
Next Scheduled EDR Contact: 05/10/2010
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/18/2009
Date Data Arrived at EDR: 12/21/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 28

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/21/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/24/2009
Date Data Arrived at EDR: 12/17/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 32

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/27/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/18/2010
Date Data Arrived at EDR: 01/19/2010
Date Made Active in Reports: 01/29/2010
Number of Days to Update: 10

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/19/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action (a??cleanupsa??) tracked in EnviroStor.

Date of Government Version: 02/08/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 9

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/09/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Quarterly

FINANCIAL ASSURANCE 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/11/2010
Date Data Arrived at EDR: 01/12/2010
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 6

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Varies

FINANCIAL ASSURANCE: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 03/12/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/19/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/24/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/19/2010
Date Data Arrived at EDR: 01/21/2010
Date Made Active in Reports: 01/29/2010
Number of Days to Update: 8

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/19/2010
Date Data Arrived at EDR: 01/21/2010
Date Made Active in Reports: 02/02/2010
Number of Days to Update: 12

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/10/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 7

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/08/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 01/29/2010
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 11/18/2009
Date Data Arrived at EDR: 11/20/2009
Date Made Active in Reports: 12/08/2009
Number of Days to Update: 18

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/28/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/2009
Date Data Arrived at EDR: 12/28/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 21

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/25/2010
Date Data Arrived at EDR: 01/27/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 22

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/25/2010
Next Scheduled EDR Contact: 05/10/2010
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 03/02/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/09/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 20

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/25/2010
Next Scheduled EDR Contact: 05/10/2010
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/25/2010
Date Data Arrived at EDR: 01/25/2010
Date Made Active in Reports: 02/02/2010
Number of Days to Update: 8

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 01/25/2010
Next Scheduled EDR Contact: 05/10/2010
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/25/2010
Date Made Active in Reports: 02/02/2010
Number of Days to Update: 8

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/18/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 01/20/2010
Date Data Arrived at EDR: 02/03/2010
Date Made Active in Reports: 02/23/2010
Number of Days to Update: 20

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/11/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: No Update Planned

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 12/02/2009
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 16

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/12/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/03/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 16

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/12/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/03/2010
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 02/23/2010
Number of Days to Update: 11

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/12/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/29/2009
Date Data Arrived at EDR: 12/29/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 20

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/27/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 22

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 12/28/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 01/27/2010
Date Made Active in Reports: 02/02/2010
Number of Days to Update: 6

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 12/28/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 01/05/2010
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 01/29/2010
Number of Days to Update: 14

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/12/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 01/21/2010
Date Data Arrived at EDR: 02/02/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 16

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/22/2010
Next Scheduled EDR Contact: 04/26/2010
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/08/2009
Date Data Arrived at EDR: 12/09/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 40

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/15/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 07/16/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 11/26/2008
Number of Days to Update: 28

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 12/04/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 45

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 12/15/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 34

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 12

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/14/2009
Date Data Arrived at EDR: 10/15/2009
Date Made Active in Reports: 11/02/2009
Number of Days to Update: 18

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/28/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/05/2010
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 13

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/18/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 04/07/2009
Date Data Arrived at EDR: 04/07/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/18/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 02/15/2010
Next Scheduled EDR Contact: 05/31/2010
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/07/2009
Date Data Arrived at EDR: 12/10/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 39

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/07/2009
Date Data Arrived at EDR: 12/10/2009
Date Made Active in Reports: 12/22/2009
Number of Days to Update: 12

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 06/21/2010
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2010
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 12

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/05/2010
Next Scheduled EDR Contact: 04/19/2010
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 04/01/2009
Date Data Arrived at EDR: 04/02/2009
Date Made Active in Reports: 04/09/2009
Number of Days to Update: 7

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 01/26/2010
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 03/04/2010
Number of Days to Update: 7

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/23/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/23/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/27/2009
Date Data Arrived at EDR: 12/21/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 28

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/21/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/28/2009
Date Data Arrived at EDR: 12/31/2009
Date Made Active in Reports: 01/18/2010
Number of Days to Update: 18

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/28/2009
Next Scheduled EDR Contact: 04/12/2010
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 03/02/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 02/05/2010
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/20/2010
Next Scheduled EDR Contact: 05/03/2010
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/04/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 03/17/2010
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/11/2010
Next Scheduled EDR Contact: 05/24/2010
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 12/01/2009
Date Made Active in Reports: 12/14/2009
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 02/23/2010
Next Scheduled EDR Contact: 06/07/2010
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 11/03/2009
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 02/22/2010
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 03/01/2010
Next Scheduled EDR Contact: 06/14/2010
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 07/17/2009
Date Made Active in Reports: 08/10/2009
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/21/2009
Next Scheduled EDR Contact: 04/05/2010
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WINCHELL COVE ROAD
7020 MILLERTON ROAD
FRIANT, CA 93626

TARGET PROPERTY COORDINATES

Latitude (North):	36.99060 - 36˚ 59' 26.2''
Longitude (West):	119.6579 - 119˚ 39' 28.4''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	263452.0
UTM Y (Meters):	4096929.0
Elevation:	676 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	36119-H6 FRIANT, CA
Most Recent Revision:	1964
North Map:	37119-A6 MILLERTON LAKE WEST, CA
Most Recent Revision:	1981

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

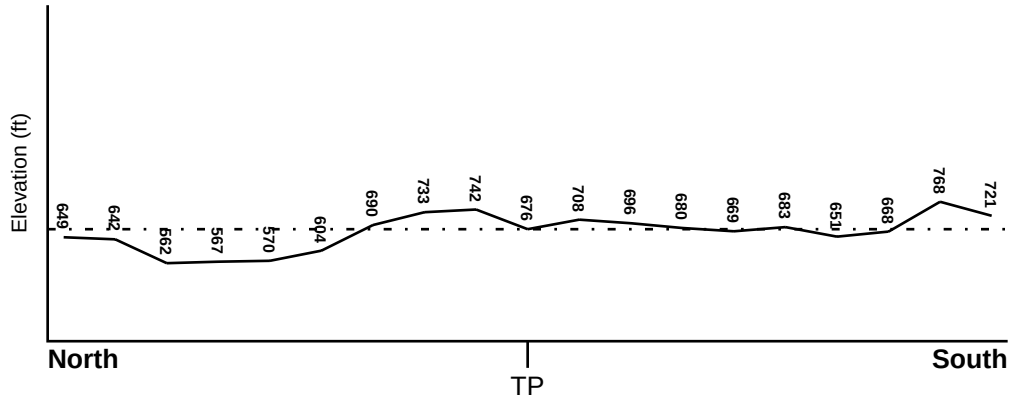
TOPOGRAPHIC INFORMATION

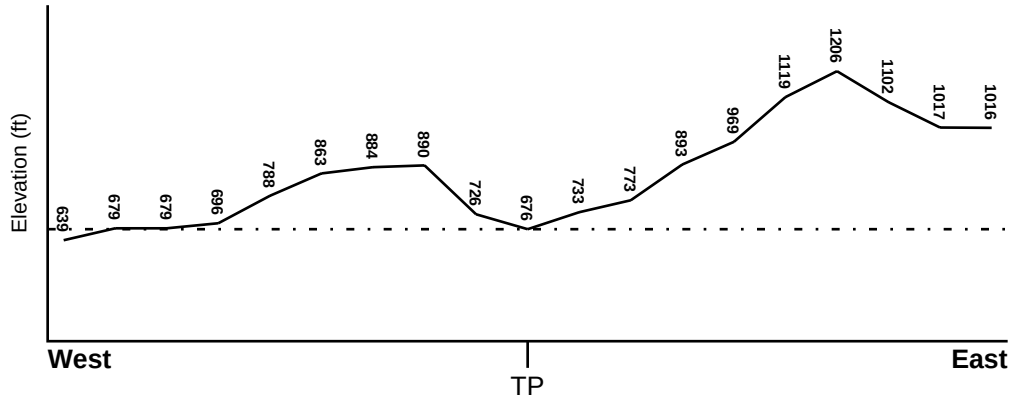
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 676 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
FRESNO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06019C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
FRIANT	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

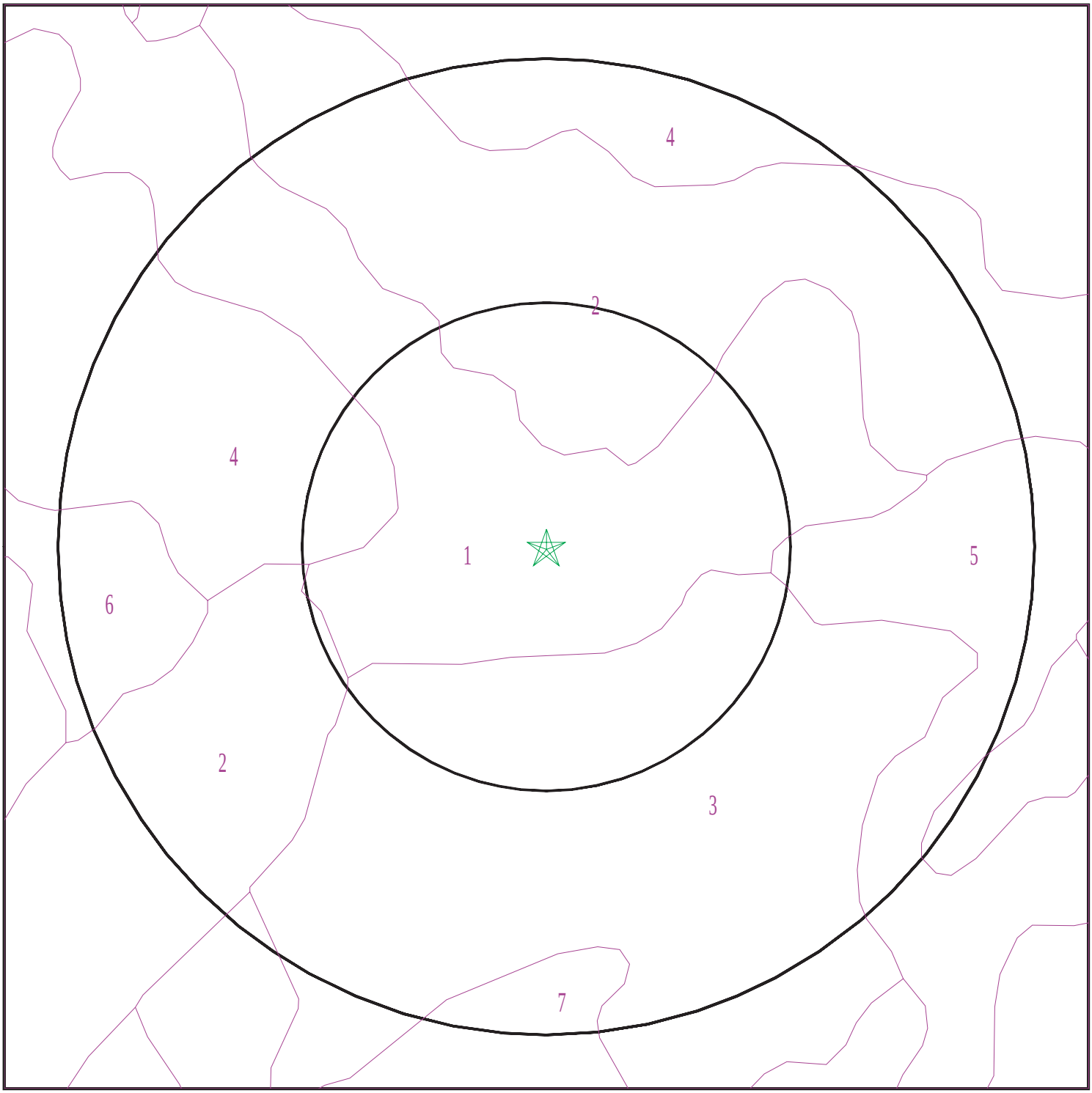
Era:	Mesozoic
System:	Cretaceous
Series:	Lower Cretaceous granitic rocks
Code:	Kg1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 2724646.1s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME: Winchell Cove Road ADDRESS: 7020 Millerton Road Friant CA 93626 LAT/LONG: 36.9906 / 119.6579	CLIENT: Analytical Environmental Serv. CONTACT: Bibiana Alvarez INQUIRY #: 2724646.1s DATE: March 18, 2010 6:35 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 5 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
2	7 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
3	14 inches	18 inches	bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:

Soil Map ID: 2

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 5 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
2	7 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
3	14 inches	18 inches	bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:

Soil Map ID: 3

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
2	14 inches	29 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:
3	29 inches	33 inches	bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 4.2 Min: 1.4	Max: Min:

Soil Map ID: 4

Soil Component Name: AUBERRY

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 5 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0	Max: Min:
2	11 inches	16 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0	Max: Min:
3	16 inches	35 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0	Max: Min:
4	35 inches	42 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0	Max: Min:
5	42 inches	46 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 1 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: HANFORD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1
2	16 inches	72 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.3 Min: 6.1

Soil Map ID: 6

Soil Component Name: CENTERVILLE

Soil Surface Texture: cobbly clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	20 inches	cobbly clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.1 Min: 0	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	20 inches	31 inches	cobbly clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.1 Min: 0	Max: Min:
3	31 inches	35 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.1 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: SESAME

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 10 Min: 1	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	9 inches	22 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 10 Min: 1	Max: Min:
3	22 inches	29 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 10 Min: 1	Max: Min:
4	29 inches	33 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 10 Min: 1	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

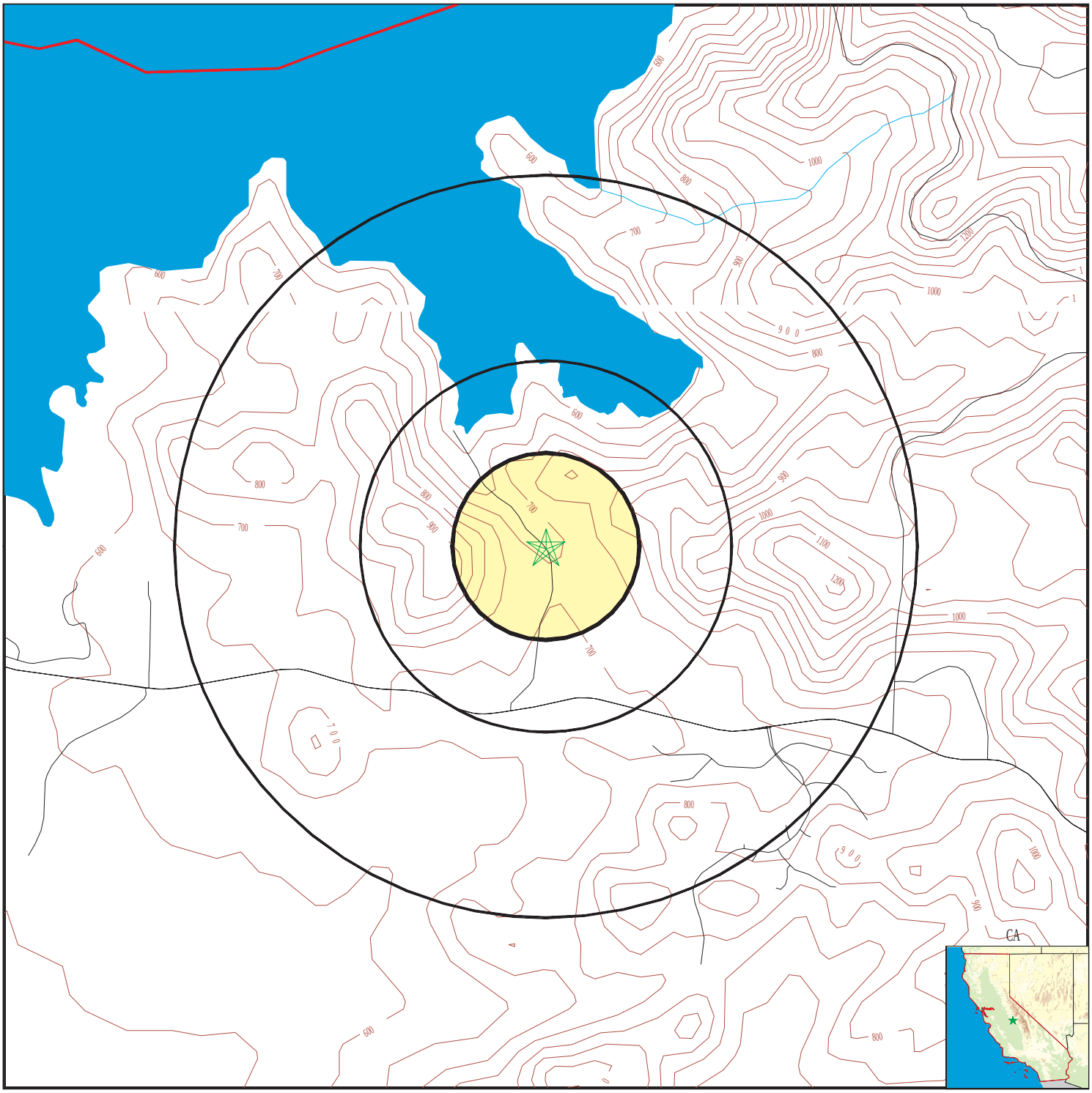
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 2724646.1s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME: Winchell Cove Road ADDRESS: 7020 Millerton Road Friant CA 93626 LAT/LONG: 36.9906 / 119.6579	CLIENT: Analytical Environmental Serv. CONTACT: Bibiana Alvarez INQUIRY #: 2724646.1s DATE: March 18, 2010 6:34 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for FRESNO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for FRESNO COUNTY, CA

Number of sites tested: 100

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.251 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.433 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX C

CEQA CHECKLIST SIGNATURE PAGE

File original and one copy with:	Space Below For County Clerk Only.
Fresno County Clerk **2221 Kern Street** **Fresno, California 93721**	CLK-2046.00 E04-73 R00-00

Agency File No:	**LOCAL AGENCY MITIGATED NEGATIVE DECLARATION**	County Clerk File No: **E-**

Responsible Agency (Name):	Address (Street and P.O. Box):	City:	Zip Code:
Fresno County	2220 Tulare St. Sixth Floor	Fresno	93721

Agency Contact Person (Name and Title):	Area Code:	Telephone Number:	Extension:
Ejaz Ahmad, Planner	559	600-4228	-

Applicant (Name):	Project Title:
Fresno County Department of Public Works and Planning, Resources Division	County Service Area 34 Winchell Cove Pipeline Project EA/IS 6241

Project Description:

The Project is located within and in the immediate vicinity of the Millerton Lake State Recreation Area (MLSRA), in Fresno County, California. The MLSRA is located approximately 17 miles northeast of the City of Fresno, and 19 miles east of the City of Madera. The Proposed Action is intended to build off of Phase I of the County Service Area (CSA) 34 Millerton Lake Pumps and Pipeline Maintenance Project and involves the construction of a parallel pipeline extending from the Winchell Cove submerged pump station. The new pipeline would branch from where the existing pipeline reduces from 14 to 12 inches or at the blind flange on either side of the platform, and would run parallel with the existing CSA 34 12-inch pipeline. From the pumps, the pipeline would extend for approximately 0.56 miles through the Millerton Lake bed to the Winchell Cove Marina. From the marina, the pipeline would be installed within the County's existing CSA 34 pipeline easement, extending for approximately 0.5 miles south within the Winchell Cove Road paved right-of-way, where it would transition through a public utility easement located within land held in federal trust for the Table Mountain Rancheria for approximately 1,600 feet in a southeasterly direction and terminate just north of Millerton Road. Where appropriate, cross connections with the existing pipeline would be installed to ensure even pressure and travel velocities in both pipelines. The proposed parallel raw water pipeline would keep flow velocities at a level that will not cause excessive pipe wear, head loss, or water hammer in the system. Continued use of the existing pipeline could cause damage to the newly replaced pumps and result in large energy demands due to inefficient operation of the pumps and motors. The Project is needed to provide system flexibility, improve water supply reliability, provide more efficient operations in the delivery of raw water to the existing users within CSA 34. In addition, the Project would provide CSA 34 water users with a contingency plan in the event of an emergency and system malfunction. No changes to water rights or place of use would result from the Project.

Justification for Negative Declaration: Environmental Assessment / Initial Study (EA/IS) Application No. 6241 indicates there is no evidence in the record that demonstrates that the project will have a significant effect on the environment. Potential impacts to water quality and soils will be addressed by the proper permits to be obtained from the Army Corps of Engineers. Potential impacts regarding biology have been addressed in the Biological Resources section of the EA/IS which include specific mitigation measures for the project that will reduce potential impacts to biological resources to a less than significant level. Potential impacts to unknown buried cultural and archaeological resources were addressed by mitigation measures that would reduce the potential for impacts in the event of inadvertent discovery. Potential impacts regarding wildland fires were addressed by the applicant accepting mitigation measures which reduce the risk of starting fires during construction. Potential for temporary impacts associated with traffic and transportation during construction were addressed by the applicant accepting to implement a traffic control plan and other measures. Based on the Initial Study, staff has concluded that preparation of an Environmental Impact Report is not required. Approval of the Mitigated Negative Declaration is recommended and is subject to approval by the decision-making body.

Finding: With the incorporated Mitigation Measures, the proposed project will have a less than significant impact on the environment.

Newspaper and Date of Publication:	Review Date Deadline:
Fresno Business Journal –	

Date:	Type or Print Signature:	Submitted by (Signature):
	Will Kettler, Principal Planner	

State 15083, 15085

County Clerk File No. _____

APPENDIX D

CSA 34 PHASE II WINCHELL COVE PIPELINE DESIGN MEMORANDUM

Quad Knopf

CSA 34 PHASE II - WINCHELL COVE PIPELINE
DESIGN MEMORANDOM

Date: December 9, 2010

To: Willis E. Robinson, Ph.D., P.E., Project Manager
Department of Public Works and Planning, Design Division
County of Fresno

From: Rex Mason, PE, Senior Civil Engineer, Quad Knopf, Inc.

Project: CSA 34 Phase 2 - Winchell Cove Pipeline

Subject: Evaluation of Need for Parallel Pipeline

This design memorandum has been prepared to describe the purpose and need for the proposed County Service Area (CSA 34) Phase II Winchell Cove Pipeline Improvement / Maintenance Project.

Existing System

The existing system, which provides independent utility to CSA 34, includes an intake platform with four pumps located on the bottom of the lake in Winchell Bay, a single transmission line, a Surface Water Treatment Plant (SWTP) and storage tank. The platform and pumps were installed in 2010 to replace a broken and deteriorated similar existing system installed in 1988, which had obvious signs of wear and deterioration. The pumps discharge water into a common manifold and then into a 14" pipeline that extends for approximately 200 ft and reduces in size to 12". The 12" line then continues southerly within the lake bottom to Winchell Cove. After leaving the lake, it continues along Winchell Cove Road and east along Millerton Road, then crosses Millerton Road and continues south into the Brighton Crest community. It discharges into a storage pond on the golf course for irrigation as well as to a SWTP and storage tank. The SWTP provides potable water to the Brighton Crest community homeowners and the Eagle Springs Golf and Country Club. The existing pipelines from the pumps to the SWTP were also installed in 1988.

Discussion of Existing System

Integrity of the Pipe:

A small segment of existing pipe near the south end of the project near Millerton Road was removed by the pump and pipeline replacement contractor at the same time the pumps were replaced. The pipe segment was inspected by a Quad Knopf Staff Engineer (see Attachment 1 for pictures of pipe segment). The pipe is 12" internal diameter, between 3/8-inch and ½-inch wall thickness and is ductile iron with an interior coating. The pipe segment showed no obvious signs of corrosion or deterioration on the inside or outside. There was no indication of a protective polyethylene wrap on the inspected section of pipeline. This segment is not an indication of the entire mile run of pipe, especially the portion of pipe under the lake.

The Pump Replacement Contractor's Construction Manager stated that he observed the 12" ductile iron pipe at the location of the vault where the emergency service connection was installed. He confirmed that no protective polyethylene wrap was observed on the portion of the pipe that he examined. The Construction Manager did state that the 14" welded steel pipe at the pump platform needed minor cleaning prior to connecting that pipe to the new manifold piping on the platform.

Fresno County Resident Engineer, Dave Blanchard reported to County Project Manager, Willis Robison, that while the pipe was in fairly good condition, there were issues and concerns raised during installation of the new platform. The support structures that held the previous platform were damaged which added additional stress to the 14" pipeline that is located under the lake. Due to the deteriorated condition of the entire platform along with the failure of one of the connection rods, the platform was replaced during the 2010 pump installation process which has alleviated this problem.

Useful Life of Ductile Iron Pipe

Although the design life of ductile iron pipe is supposed to be 100 years per the Ductile Iron Pipe Research Association (DIPRA) range under normal trench conditions, i.e., under standard bedding and backfill conditions, its useful life can be limited by internal and external corrosion. The US EPA reference indicates a useful life of 35 to 50 years for all transmission mains. Quad Knopf obtained photographs of the pipe installation from W M Lyles Construction Company dating back to 1988. It appears from these photos that the existing pipe was not wrapped with polyethylene which is currently standard practice to minimize external corrosion. In the light of the above, we expect the useful life to be in the low end of the above range, i.e., 35 years, assuming that the pipeline is free of any additional conditions that would aggravate or diminish its integrity. Since the pipe was installed in 1988, it is likely well beyond the mid point of its useful life.

Pipe Failure and Consequences

There is a potential for pipe failure in the form of broken pipe, gasket failure, leak, corrosion, etc. This potential is somewhat heightened by the observed damage and apparent short comings detected during the replacement of the old platform and pumps. If such a scenario were to occur at any time, but especially during peak demand, i.e., summer, with water in the lake at its highest level, the County would have difficulty and incur great expense to find and fix the problem. The Brighton Crest community and Eagle Springs Golf and Country Club rely on this pipeline as their sole conveyance for raw water from the lake. Any downtime due to repair would entail the County trucking in potable water from a distance of 3 miles (Fresno) for the community of 100 existing homes and 54 previously approved but currently undeveloped lots units for an extended duration.

The length of trucking duration would be dependent on the ability of the County to produce either a repair or a secondary pipeline. The current proposed project which includes the environmental review, system analysis, engineering design, and secondary pipeline construction would need to be completed for a permanent replacement of this system.

Safe and Reliable Water System

The California Department of Public Health requires water agencies to provide safe and reliable pumping and conveyance capability to its customers. Recent replacement of the pumps has ensured a reliable pumping capacity. In the summer of 2010, a check valve failed presumably due to excessive wear and tear caused by near constant single pump operation. The County had to order a restricted use mandate on the residents during peak summer use, to ensure that the existing system could provide enough water during repair. The County was concerned that the remaining pump would fail and leave the homeowners without water.

In order to provide the necessary volume required of the Brighton Crest community, a pump needs to operate for longer stretches of time than if a larger or parallel pipe were available to accept the flows. A parallel pipe would provide redundancy to the system which currently relies on a single pipe that is under the lake. Additionally, this pipe would reduce the length of time the pumps would need to operate to provide the necessary capacity to provide a safe and reliable conveyance system.

As the system relies on volume, not pressure, the ability to move the raw water intermittently, as needed, allows for more efficient delivery and energy-saving operations.

Recommendation

Along with the Phase 1 pump installation improvements completed in 2010, the proposed Phase 2 construction of a second pipeline transmission main in Millerton Lake is

recommended to provide system redundancy, improve reliability, and provide more efficient operations in the delivery of raw water to the existing users within CSA 34. This pipeline will further alleviate the potential of conveyance problems, should the existing pipeline fail.

The planned construction starts at the end of the existing manifold header blind flange. The connection will be made at the header flange with a valve so that the system can be turned back on quickly and the new pipeline can be constructed without disturbing the existing pipeline and water service to the customers. The new pipeline will run parallel with the existing main in the Lake, then follow Winchell Cove Road, ending north of Millerton Road. A future connection will extend into Brighton Crest. The existing and new pipelines will be connected at locations determined by the surge analysis and will include a valve so the connection can be closed if needed.

References

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