

# RECLAMATION

*Managing Water in the West*

Final Environmental Assessment

## **San Felipe Pipeline Road/Levee and Culvert Repair between the Santa Clara Conduit CFI/CFO**

EA-15-007



## **Mission Statements**

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated 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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# Section 1 Introduction

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the Draft Finding of No Significant Impact (FONSI) and Draft Environmental Assessment (EA) between July 07, 2016 and July 21, 2016. Reclamation received no comment letters. Changes between this Final EA and the Draft EA, which are not minor editorial changes, are indicated by vertical lines in the left margin of this document.

## 1.1 Background

In the mid-1980s, Reclamation built an access road on top of a levee that runs parallel to the Santa Clara Conduit<sup>1</sup> (Conduit), a component of the San Felipe Division of the Central Valley Project (CVP). The levee/access road crosses both the Calaveras Fault and San Felipe Lake, a low-lying ephemeral lakebed, located in San Benito County, California southeast of Gilroy and northwest of Hollister (see Figure 1). In winter, it is common for the area surrounding the lake to fill with rainwater, accompanied by a rise in the water table, which is very shallow in this area. The presence of high water led to the raised roadway design for the levee/access road, which is approximately 4,000 feet long, 10 feet high, and 20 feet wide, with 20 embedded culverts that allow water to pass through without impounding.

Over the past few years, the levee/access road has suffered from repeated slope failures due to culvert failures related to corrosion, erosion, and/or seismic activity. Santa Clara Valley Water District (Santa Clara), pursuant to their operating agreement with Reclamation, has repaired the levee/road in 2005, 2007, 2011, and 2013. Santa Clara has anticipated the failure of four additional culverts (Stations 86+80, 86+30, 85+30, and 84+80) along the portion of the access road near Tesquisquita Slough (see Figure 2) due to degrading and aged infrastructure. On February 9, 2016, Santa Clara discovered that the westernmost culvert (Station 86+80) had failed and that the culvert immediately to the east (Station 86+30) was damaged and likely to fail.

## 1.2 Need for the Proposed Action

There is only one access road to the Conduit's Calaveras Fault Inlet-Calaveras Fault Outlet (CFI-CFO) facilities (vaults, valves, pipelines, and instrumentation) and it has been badly damaged due to culvert failure. Santa Clara needs to repair the CFI/CFO levee/access road to re-establish access to these facilities in order to maintain and inspect the Conduit.

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<sup>1</sup> The Conduit is owned by Reclamation, operated, and maintained by Santa Clara Valley Water District pursuant to an operating agreement.

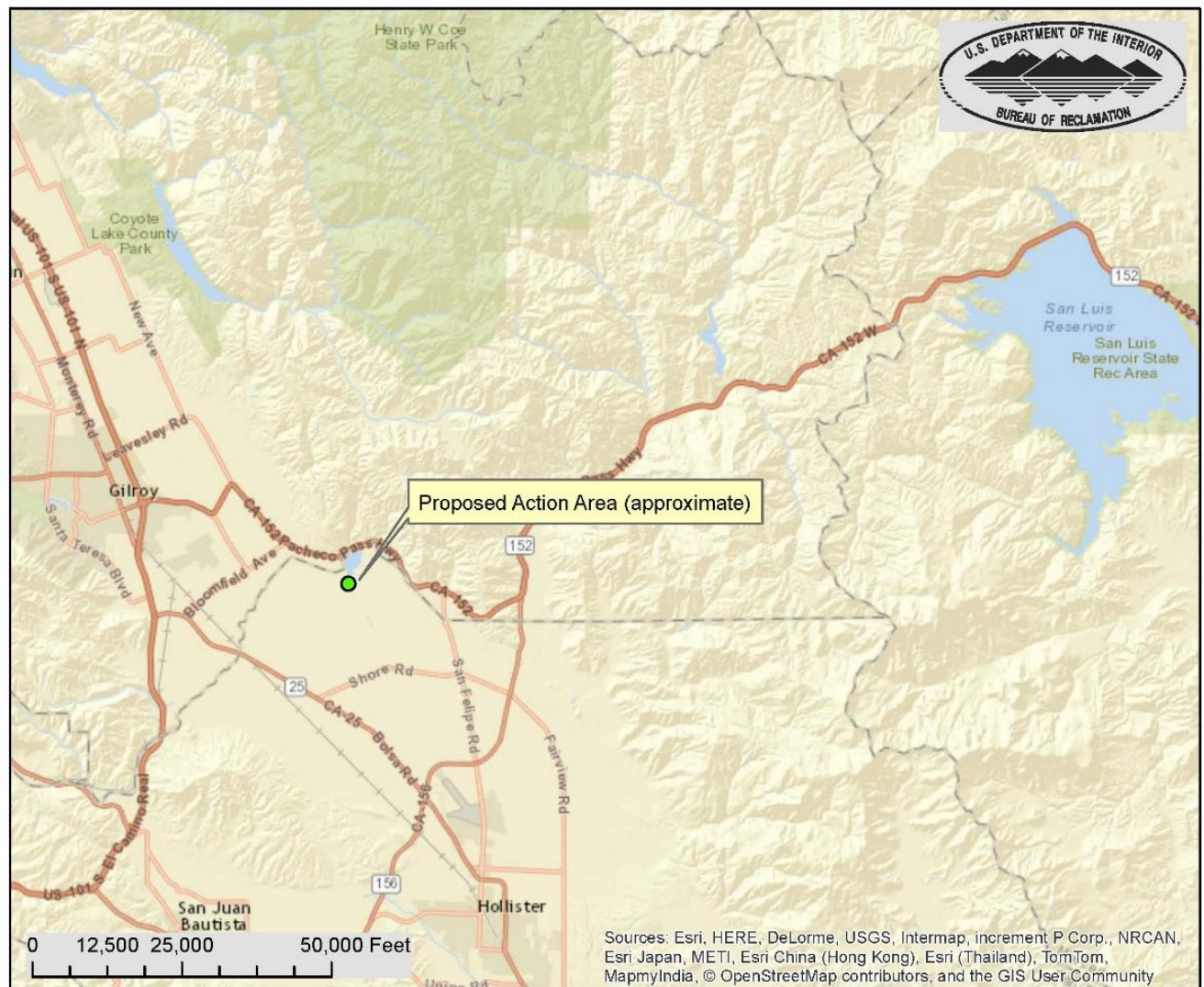
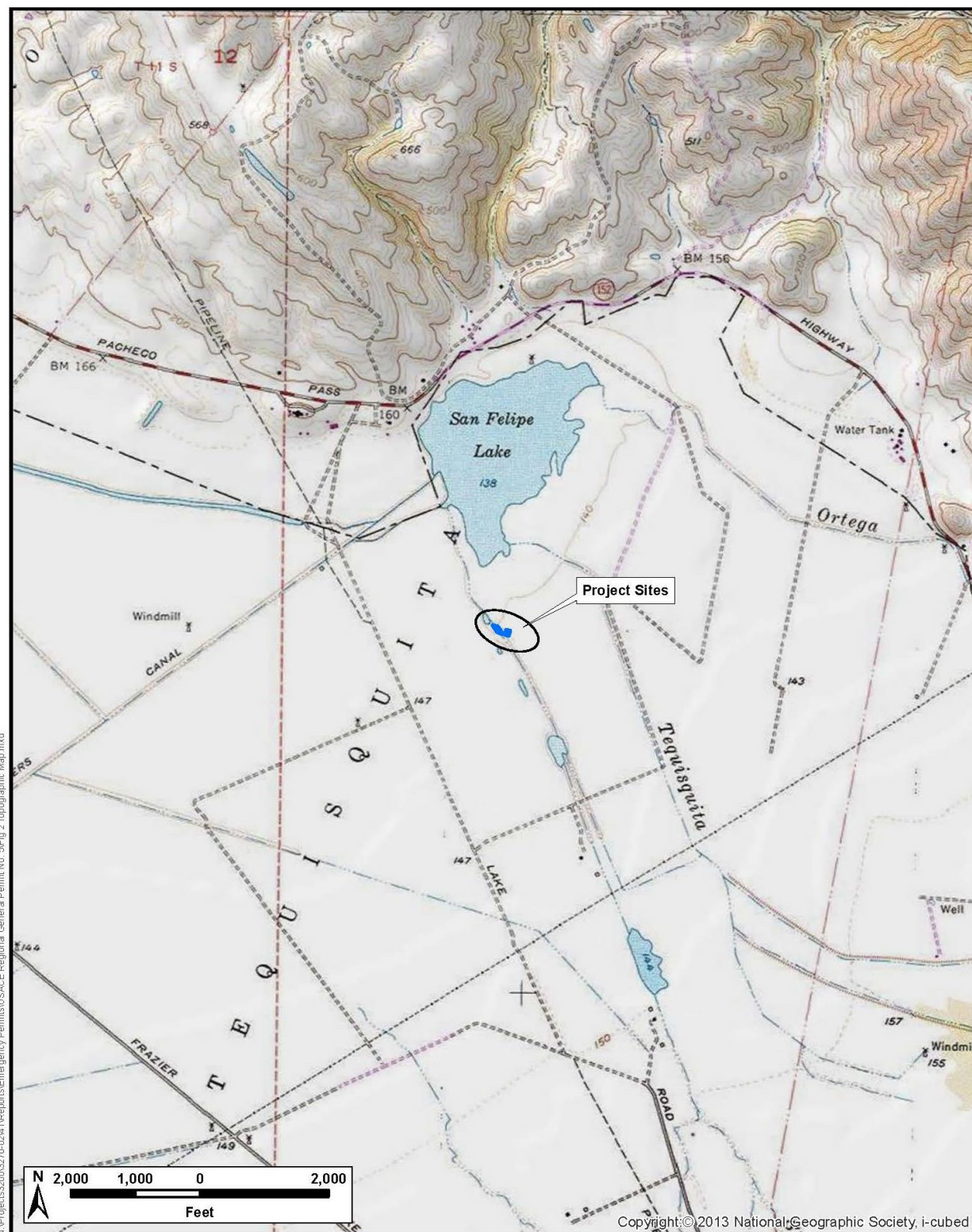


Figure 1 Vicinity Map for Proposed Action





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Ecological Consultants

**Figure 2: Topographic Map**  
San Felipe System Calaveras Inlet and Outlet Maintenance Site:  
USACE Regional General Permit No. 5  
February 2016

Figure 2 Topographic Map of the Proposed Action Area

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## Section 2 Alternatives Including the Proposed Action

This EA 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.

### 2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve the replacement of four culverts along the Conduit's CFI-CFO access road. Santa Clara would not have access to this area for maintenance.

### 2.2 Proposed Action

Santa Clara, on Reclamation's behalf, proposes to replace the four culverts identified in Figure 3 and to repair eroded portions of the CFI/CFO levee/access road. Specific project details are included below.

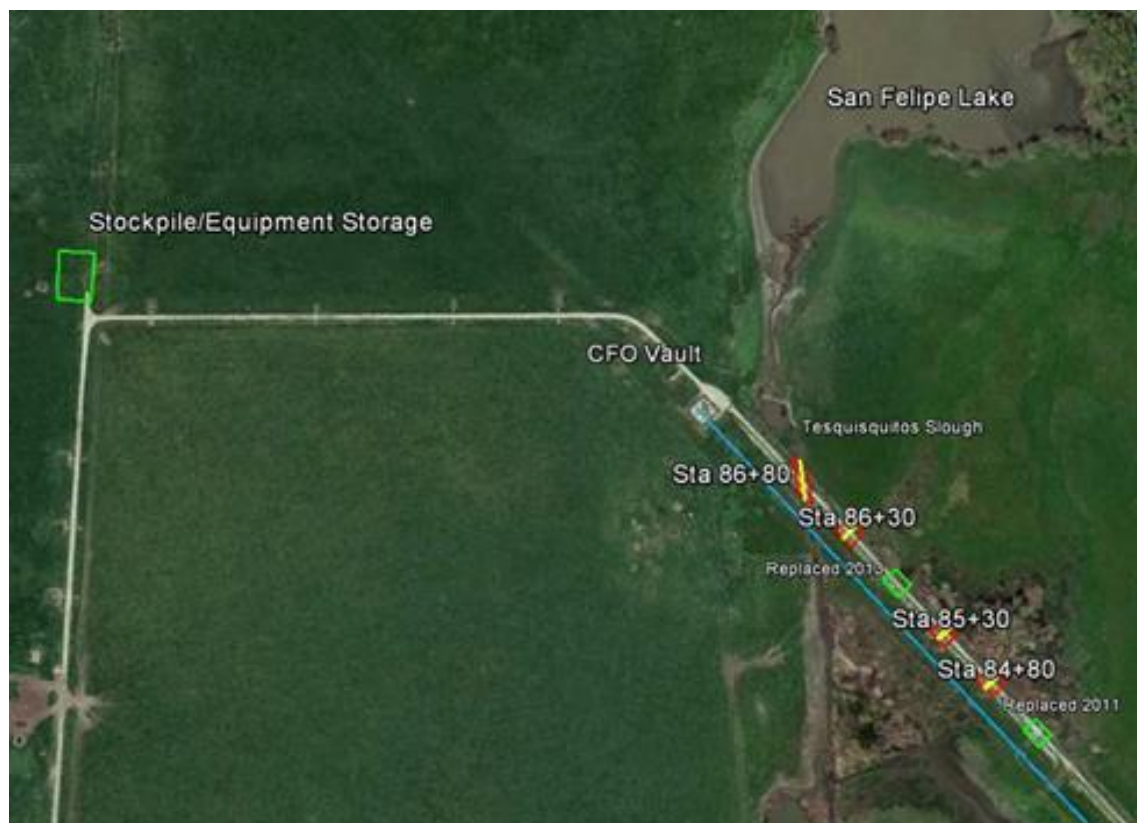


Figure 3 Proposed Action Area

Under the Proposed Action, up to 1,100 cubic yards of road bed, soil, and armor stone material would be excavated at Tesquisquita Slough for the removal of the culvert at Station 86+80. Up to 225 cubic yards of the same materials would be excavated at the remaining three culverts (Stations 86+30, 85+30, and 84+80). The excavated materials would be stored at a designated storage location approximately 0.36 mile west of the culverts where the raised access road intersects Lake Road (see Figure 3). Course-grained base and geofabric will be used in the work area to control erosion on the excavated slopes during construction activities.

At all four locations, 30-inch round high density polyethylene (HDPE) pipe culverts would be installed to replace the existing 36-inch corrugated steel culverts. The new culvert at Station 86+80 would be 100 feet long and the remaining three culverts would be 50 feet long each. The excavated armor stone would be reused by placing it on top of the new culverts and on the sides of the access road at the Proposed Action site. Backfill material would consist of 6-inch Class II road base with 3-inch topping stone and would be compacted using a vibratory tamper to match the existing access road toe, slope, and height.

A temporary cofferdam would be installed at Tesquisquita Slough to divert flows around Station 86+80. Water would be pumped around the work site from the south side of the work area downstream to the north side to allow continued flow. Dewatering activities would also occur at the other three stations when ponded water is present. In these locations sandbag cofferdams would be constructed on each side of the road and the ponded water pumped and discharged to the surrounding uplands. Any water from these three culverts will be pumped around each work site to the slough channel on the north side of the road. Gasoline-powered pumps with 4-inch suction and discharge ports would be used for all dewatering activities.

Construction work would be performed from the top of the levee by equipment including: 10-yard dump truck, backhoe, hydraulic excavators, off-highway trucks, portable pumps, vibratory tamper, and hand tools. Several dewatering pumps may be used.

### **2.2.1 Environmental Commitments**

Reclamation and Santa Clara shall implement the environmental protection measures included in the Biological Opinion (8-8-15-F-14) received from the U.S. Fish and Wildlife Service (Service) to avoid and/or reduce environmental consequences associated with the Proposed Action (see Appendix A). Environmental consequences for resource areas assume the measures specified would be fully implemented.

### **2.2.2 Permitting for the Proposed Action**

Prior to construction within the vicinity of the Conduit, Santa Clara would submit, to the extent necessary, all appropriate applications for working within a waterway including:

- California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement
- Central Valley Flood Protection Board encroachment permit
- U.S. Army Corps of Engineers Clean Water Act Sections 10 and 404
- California Regional Water Quality Control Board Clean Water Act Section 401

Copies of all permits shall be provided to Reclamation.

## Section 3 Affected Environment and Environmental Consequences

This section identifies the potentially affected environment and the environmental consequences involved with the Proposed Action and the No Action Alternative, in addition to environmental trends and conditions that currently exist.

### 3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 1.

Table 1 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations.
Indian Sacred Sites	The Proposed Action would not limit access to ceremonial use of Indian Sacred Sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area.
Land Use	No conversion of undeveloped/native land is proposed. Consequently, there would be no impacts to land use as a result of the Proposed Action.

### 3.2 Air Quality

Section 176 (C) of the Clean Air Act (42 U.S.C. 7506 (C)) requires 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 State Implementation Plan required under Section 110 (a) of the Federal Clean Air Act (42 U.S.C. 7401 [a]) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with State Implementation Plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards 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 would, in fact conform to the applicable State Implementation Plan before the action is taken.

On November 30, 1993, the Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or

exceed certain *de minimis* amounts thus requiring the federal agency to make a determination of general conformity.

### 3.2.1 Affected Environment

The Proposed Action area lies within the North Central Coast Air Basin under the jurisdiction of the Monterey Bay Unified Air Pollution Control District (Air District). The pollutants of greatest concern in San Benito County are: ozone, ozone precursors such as reactive organic gases (ROG) or volatile organic compounds (VOC), and Inhalable Particulates (PM<sub>10</sub>). The North Central Coast Air Basin has reached Federal and State attainment status for carbon monoxide (CO), inhalable particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>), lead, nitrogen dioxide, and sulfur dioxide (Air District 2015). Although Federal attainment status has been reached for ozone and PM<sub>10</sub> the State standard has not been met for either (Air District 2015).

### 3.2.2 Environmental Consequences

#### **No Action**

There would be no impact to air quality, as conditions would remain the same as existing conditions.

#### **Proposed Action**

Minimal short-term air quality impacts would occur associated with construction, generally arising from dust generation (fugitive dust) and operation of construction equipment. Estimated air quality emissions for construction activities associated with the Proposed Action are included in Table 2 below.

Table 2 Estimated Construction Emissions (metric tons/year)

Equipment	Hours of Operation	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>2.5</sub> & PM <sub>10</sub>	CO <sub>2</sub>	CH <sub>4</sub>
Diesel dump truck	20	0.0170	0.0585	0.1310	0.0003	0.0043	28.4330	0.0015
Excavator	100	0.0185	0.0568	0.1479	0.0003	0.0049	26.2717	0.0017
Wheel loader	30	0.0293	0.1490	0.2089	0.0003	0.0117	24.5153	0.0026
2 Skip loaders	30	0.0169	0.1033	0.1208	0.0002	0.0067	17.6017	0.0015
Vibratory tamper	10	0.0019	0.0102	0.0122	0.0000	0.0005	1.6734	0.0002
Light vehicle traffic	84	0.0032	0.0291	0.0028	0.0001	0.0004	5.5844	0.0003
<b>Thresholds of Significance (tons per year)</b>		<b>10</b>	<b>100</b>	<b>15</b>	<b>27</b>	<b>15</b>	<b>25,000*</b>	
<b>Totals</b>		0.0868	0.4069	0.6236	0.0012	0.0285	104.0795	0.0078

Source: Air District 2015

Notes: SO<sub>x</sub> = Sulfur dioxides CH<sub>4</sub> = Methane \*as CO<sub>2</sub> equivalents

Emissions were calculated based on equipment needed to replace the four culverts, relocate the telemetry cable (twice), and repair the levee/access road as well as the number of days and trips required for installation activities over a three-week period. As shown in Table 2, the criteria pollutant emissions from the Proposed Action are well below the Air District's thresholds of significance. Consequently, the Proposed Action would not result in a substantial adverse impact upon air quality and a conformity analysis pursuant to the Clean Air Act is not required.

### **Cumulative Impacts**

The entirety of the installation and operation emissions for the Proposed Action is well below the *de minimis* thresholds established by the Air District. As a result, the Proposed Action would not contribute to cumulative adverse air quality impacts.

## **3.3 Biological Resources**

### **3.3.1 Affected Environment**

The Proposed Action Area is located in a flat valley at the base of the Diablo Range and at the southern border of the Conduit. The levee/access road is located near San Felipe Lake, which is a shallow, turbid lake that is a natural sag pond formed by the Calaveras Fault Zone. Two tributaries enter San Felipe Lake from the east, Tesquisquita slough from San Benito county and Pacheco Creek from Santa Clara County. When full, the lake covers about 160 acres. The lake depth is about three to five feet. Historically, the lake would recede significantly during the summer and would dry up completely during some years.

The Proposed Action Area consists mostly of an existing graveled road that parallels the Conduit. Santa Clara maintains the area as regularly as environmental restrictions permit keeping it relatively free of vegetation. Vegetation in the surrounding area includes grasslands that are currently grazed by cattle. Most of the pastures have few or no trees, but a few trees stand around the perimeter of San Felipe Lake. Wetland vegetation such as sedge and brushes, shrubs, and small stands of deciduous trees (willows) are found along the shores of Tesquisquita Slough and San Felipe Lake. Other vegetation such as cattails and other marsh-like species are also found in the area.

The area along the graveled levee/access road could be considered a southern seasonal portion of the historic San Felipe Lake. Annually, in the spring and summer (after the rainy season) this portion of the lakebed dries and becomes pastureland for cattle. It is noted that even in the dry season when the lake has receded, the areas around the culvert crossings along the levee/access road remain wetted and may be classified as a wetland. At the outlet end of the Station 86+80 culvert, flowing water has eroded the soils to create a catch basin.

### **Federally Listed Species**

A list of Federally listed threatened and endangered species and critical habitat that occur within the Proposed Action Area and/or may be affected as a result of the Proposed Action was obtained on October 23, 2014, by accessing the Service database

[http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm). The Service list was compared with the California Natural Diversity Database (CNDDB) records and other information in Reclamation's files for completeness. Based on this information, the Federally threatened California tiger salamander (*Ambystoma californiense*) and its critical habitat, the Federally threatened California red-legged frog (*Rana draytonii*), the Federally endangered least Bell's vireo (*Vireo belli pusillus*), and the Federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) occur or may occur in the Proposed Action Area. The following do not occur within the Proposed Action Area:

- bay checkerspot butterfly (*Euphydryas editha bayensis*), FT

- South Central California steelhead (*Oncorhynchus mykiss*), FT
- California red-legged frog critical habitat
- California least tern (*Sternula antillarum browni*), FE

**California red-legged frog** The Proposed Action Area is within the range of the California red-legged frog, with the nearest known locality approximately two miles south of the Proposed Action Area and three additional localities within approximately five miles of the Proposed Action Area. However, surveys in and adjacent to the Proposed Action Area in 2003 did not reveal any California red-legged frogs (Rana Resources 2003), and the nearby lake habitat was found to support a large population of predatory fish (Smith 2005). In addition, Santa Clara's biologist has not observed any federally listed species in the Station 86+80 catch basin. Fish and crayfish would prey upon early life stages of both the California red-legged frog (Service 2002 and references therein), and the proximity to San Felipe Lake, which has receded away from the catch basin, makes the occurrence of special-status amphibians unlikely. The Action Area is mostly within an existing road.

**California tiger salamander** The Proposed Action Area is also within the range of the California tiger salamander and there are known localities north and east of San Felipe Lake, with the nearest approximately 0.75 mile from the Proposed Action Area. Although the Proposed Action Area is mostly within an existing gravel road, wetlands along the side of the road are periodically connected to San Felipe Lake. Therefore, the Proposed Action Area could potentially serve as dispersal habitat between known localities to the north and east and undocumented populations elsewhere. However, fish and crayfish would prey upon early life stages of the California tiger salamander (Shaffer et al. 1993; Seymour and Westphal 1994), and the proximity to San Felipe Lake, which has receded away from the catch basin, makes their occurrence less likely.

Santa Clara hired qualified biologists to conduct surveys for the California tiger salamander at several facilities, including the CFI/CFO location. H.T. Harvey and Associates conducted larval surveys in nine small ponds that were found along the berm between the CFI and CFO on March 30, 2012 (first survey), April 26, 2012 (second survey), and May 22, 2012 (third survey). No California tiger salamander larvae were found. A number of other species were captured, including larval bullfrogs and crayfish.

**Critical Habitat** The East Bay 12 Unit of critical habitat for the California tiger salamander overlaps the Proposed Action Area. This unit is comprised of 6,642 acres of habitat and is essential to the conservation of the species as it maintains the current geographic and ecological distribution of the species within the Bay Area Geographic Region. Unit 12 represents part of the center of the distribution within the Bay Area Geographic Region and the southernmost portion of Santa Clara County, northern San Benito County, and center of the Central Coast vernal pool region.

**Least Bell's vireos** This species has been observed near the Proposed Action Area, including a 2001 breeding record approximately three miles west of the Action Area (CNDDDB 2014). However, the Action Area does not have very suitable riparian habitat for this species and surveys in 2003 revealed no breeding habitat in areas adjacent to the Action Area (Rana

Resources 2003). Since that time, periodic visits by Santa Clara biologists have not detected any least Bell's vireos in the Action Area. The site is about 200 feet from riparian habitat, with a cattail thicket in-between that habitat and the Action Area.

**San Joaquin kit fox** Kit foxes are wide-ranging and have been observed within six miles of the Action Area (CNDDDB 2014). However, surveys in and adjacent to the Action Area in 2011 by a Santa Clara biologist and in 2003 (Rana Resources) did not reveal any evidence of use by this species.

### ***Migratory Birds***

The Western Burrowing Owl may occur in the Proposed Action Area.

## **3.3.2 Environmental Consequences**

### ***No Action***

Under the No Action Alternative, continued erosion would destroy upland habitat along the road, possibly removing upland habitat used by red-legged frogs, upland refugial habitat used by the California tiger salamander, and habitat for the San Joaquin kit fox and Western Burrowing Owl.

### ***Proposed Action***

The total area of disturbance for the Proposed Action, including a 50-foot buffer around the area of ground disturbance, is 108,750 square feet (or 2.5 acres). Most of this area is located in an existing gravel roadbed (upland habitat) with a small area that is located in wetland habitat.

Construction activities may have direct effects on California red-legged frog and California tiger salamander if they are present within the Action Area. Injury and/or mortality could occur from trenching and grading in upland habitat, if frogs are temporarily using these areas. These activities could also impede and alter the movement of adult salamanders between upland habitat and breeding sites, and the dispersal of juvenile salamanders from breeding ponds to upland habitat. Construction activities that occur during the rainy season (October 15 through April 15), including fencing and excavation of linear trenches could entrap frogs and salamanders and interfere with their movement. Conservation measures have been incorporated into the project description (see Appendix A) in order to avoid and/or minimize these effects. In addition, all temporarily affected areas would be returned to pre-project conditions, eventually providing habitat quality similar to current conditions.

As this area is located within the East Bay Unit 12 California tiger salamander habitat, 2.5 acres of critical habitat would be temporarily affected. The portion of the Unit that would be affected is very small and represents mostly upland refugial habitat, with a small amount of breeding habitat also affected. All temporarily affected areas would be returned to their previous state, eventually providing habitat quality similar to preconstruction conditions.

Least Bell's vireos could be disturbed by the presence of workers and equipment, and the noise generated by the equipment, if present in the Action Area. Although breeding habitat (approximately two acres) would not be impacted, the presence of workers and equipment could deter birds from using immediately adjacent upland areas for foraging.



Approximately 2.38 acres of San Joaquin kit fox and Western Burrowing Owl habitat (out of the total 2.5 acres for the Proposed Action) would be temporarily affected during construction activities. This area includes the 50-foot buffer around the area of ground disturbance but excludes the wetland portion that is not kit fox or owl habitat. The Action Area is on the very edge of the San Joaquin kit fox's range, and the likelihood of any denning is low. However, if any kit foxes were denning in the Action Area, they could be forced to leave their dens and the Action Area. The implementation of avoidance measures included in Appendix A would avoid these potential impacts and prevent any other adverse effects.

### ***Cumulative Impacts***

Past impacts include the construction of the road itself and introductions of invasive species into San Felipe Lake, such as bullfrogs. Current and future activities on the private lands adjoining the right-of-way could impact all five protected species, including harassment from the disturbance of routine farming activities. Rodent control could impact kit foxes, burrowing owls, and both amphibians, by reducing burrow availability, as well as result in secondary poisoning of kit foxes or burrowing owls. Non-native bullfrogs and fish in San Felipe Lake are expected to continue to have an adverse cumulative impact to the California red-legged frog and California tiger salamander.

The project description contains measures that would avoid and minimize the adverse impacts and reduce their cumulative contribution. Furthermore, the direct impacts would be temporary in nature, as the Proposed Action is replacing existing, aged infrastructure, which also results in a smaller cumulative contribution.

## **3.4 Cultural Resources**

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act of 1966 (NHPA) is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the National Historic Preservation Act requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 CFR Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

### **3.4.1 Affected Environment**

The current undertaking includes two discontinuous locations: the levee road and culverts at Tesquisquita Slough and the staging area for construction. The levee road and culverts are of modern construction and the staging area is situated on current agricultural fields within valley alluvium.

In an effort to identify historic properties within the APE, Reclamation reviewed internal documents associated with multiple projects conducted in the area associated with the Reclamation owned Santa Clara and Pacheco Conduits and conducted in-field investigations. On March 10, 2016, Reclamation archaeologists conducted an in-field visit and surveyed the accessible portions of the APE. Due to recent rains and the partial failure of one of the culverts, both the north and south sides of the levee were inundated with water. San Felipe Lake, next to the levee, is an artificially constructed lake indicating a low sensitivity for the presence of intact cultural resource sites. In addition, the repeated filling with water, sedimentation, and exposure actions next to the levee also indicate a low sensitivity for the presence of intact cultural resources.

As part of the Section 106 process, pursuant to 36 CFR § 800.3(f), Reclamation identified four non-federally recognized Native American organizations that may have an interest in the Proposed Action Area: the Amah Mutsun Tribal Band, the Indian Canyon Mutsun Band of Costanoan, the Salinan Nation Cultural Preservation Association, and the Salinan Tribe of Monterey and San Luis Obispo Counties. Letters were sent to each group, affording them the opportunity to assist in the identification of cultural resources of concern that may be affected by this undertaking. No federally recognized Indian tribes were identified for this area.

### **3.4.2 Environmental Consequences**

#### ***No Action***

There would be no impact to cultural resources as conditions would remain the same.

#### ***Proposed Action***

Reclamation determined that the Proposed Action would result in no effect to any historic properties. As such, there would be no adverse impacts to cultural resources from implementation of the Proposed Action.

#### ***Cumulative Impacts***

The proposed project will have no effect on historic properties; therefore, there will be no cumulative impacts to historic properties.

## **3.5 Global Climate Change**

### **3.5.1 Affected Environment**

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change [changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil fuels, etc.] (EPA 2014a).

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). Some GHG, such as carbon dioxide (CO<sub>2</sub>), occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHG (e.g., fluorinated gases) are created and emitted solely through human activities. The principal GHG that enter the atmosphere because of human activities are CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide, and fluorinated gasses (EPA 2014a).

During the past century humans have substantially added to the amount of GHG in the atmosphere by burning fossil fuels such as coal, natural gas, oil and gasoline to power our cars, factories, utilities and appliances. The added gases, primarily CO<sub>2</sub> and CH<sub>4</sub>, are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes. At present, there are uncertainties associated with the science of climate change (EPA 2014b).

Climate change has only recently been widely recognized as an imminent threat to the global climate, economy, and population. As a result, the national, state, and local climate change regulatory setting is complex and evolving.

In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide greenhouse gases emissions. CARB is further directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020.

In addition, the EPA has issued regulatory actions under the Clean Air Act as well as other statutory authorities to address climate change issues (EPA 2014c). In 2009, the EPA issued a rule (40 CFR Part 98) for mandatory reporting of GHG by large source emitters and suppliers that emit 25,000 metric tons or more of GHG [as CO<sub>2</sub> equivalents (CO<sub>2e</sub>) per year] (EPA 2009). The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change, has undergone, and is still undergoing revisions (EPA 2014c).

### **3.5.2 Environmental Consequences**

#### ***No Action***

There would be no impact to global climate change, as conditions would remain the same as existing conditions.

#### ***Proposed Action***

As shown in Table 2, annual construction and operational emissions of CO<sub>2e</sub> are estimated to be 104.08 metric tons, well less than the EPA's 25,000 metric tons per year threshold for annually reporting GHG emissions. Accordingly, the Proposed Action would result in below *de minimis* impacts to global climate change.

#### ***Cumulative Impacts***

GHG emissions generated by the Proposed Action are expected to be extremely small, as seen in Table 2. While any increase in GHG emissions would add to the global inventory of gases that would contribute to global climate change, the Proposed Action would result in potentially

minimal to no increases in GHG emissions and a net increase in GHG emissions among the pool of GHG would not be detectable.

## **3.6 Water Resources**

### **3.6.1 Affected Environment**

Local water features within the Proposed Action Area are described in Section 3.3.1. The Conduit provides CVP water to Santa Clara's customers within Santa Clara County.

### **3.6.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, the levee/access road would eventually fail, eliminating the remote operating capability of the valves at the CFI/CFO as well as the only safe, efficient route for vehicle access. The inability to access the CFI/CFO and other portions of the Conduit in this area has the potential to adversely affect delivery of CVP water to Santa Clara's customers.

#### ***Proposed Action***

Replacement of the four culverts and repair of the levee/access road would not require shutting down the Conduit; therefore, no interruption in CVP water service would occur to Santa Clara's customers. As described in Section 2.2, course-grained base and geofabric will be used in the construction area to control erosion on the excavated slopes and to prevent any potential impacts to local waterways. In addition, Santa Clara will acquire all permits required for working in waterways and implement all necessary best management practices to avoid and/or minimize potential water quality impacts. As a result, there would be no adverse impacts to water resources from the Proposed Action.

#### ***Cumulative Impacts***

Santa Clara would implement all necessary best management practices and avoidance measures included in permits acquired for working in the waterways during replacement of the four culverts. In addition, construction activities would be temporary and the Action Area would be returned to preconstruction conditions once construction is complete. There would be no cumulative adverse effects from the Proposed Action.

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## **Section 4 Consultation and Coordination**

### **4.1 Public Review Period**

Reclamation provides the public with an opportunity to comment on the Draft FONSI and Draft EA between July 07 and 21, 2016.

### **4.2 Clean Water Act (33 U.S.C. § 1251 et seq.)**

Section 401 of the Clean Water Act (33 U.S.C. § 1311) prohibits the discharge of any pollutants into navigable waters, except as allowed by permit issued under sections 402 and 404 of the Clean Water Act (33 U.S.C. § 1342 and 1344). Section 404 of the Clean Water Act authorizes the Corps to issue permits to regulate the discharge of “dredged or fill materials into waters of the United States” (33 U.S.C. § 1344).

Santa Clara is in the process of obtaining a Section 404 permit from the Corps and a Section 401 Water Quality Certification from the Regional Water Quality Control Board.

### **4.3 Endangered Species Act (16 U.S.C. § 1531 et seq.)**

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, 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.

Reclamation initiated formal consultation with the Ventura Field Office of the Service on February 18, 2015. Reclamation received a biological opinion for the Proposed Action on June 10, 2016 (see Appendix A).

### **4.5 National Historic Preservation Act (16 U.S.C. § 470 et seq.)**

The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the National Historic Preservation Act.

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the area of potential effects, conduct cultural resource

inventories, determine if historic properties are present within the area of potential effects, and assess effects on any identified historic properties.

Reclamation reached a Section 106 finding of no historic properties affected pursuant to 36 CFR Part 800.4(d)(1). Through correspondence dated May 13, 2016, Reclamation initiated consultation with the SHPO on this finding. SHPO concurred with this finding on April 21, 2016 (see Appendix B).



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