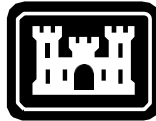


**FINAL ENVIRONMENTAL ASSESSMENT**

**PRADO DAM GASLINE REMOVAL**

**Corona, County, California**



**US Army Corps  
of Engineers®**

**Prepared by:  
U.S. ARMY CORPS OF ENGINEERS  
SOUTH PACIFIC DIVISION  
LOS ANGELES DISTRICT**

**October 2021**

**FINDING OF NO SIGNIFICANT IMPACT**  
**PRADO DAM GASLINE REMOVAL PROJECT**  
**CORONA, CALIFORNIA**

The U.S. Army Corps of Engineers, Los Angeles District (Corps) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. This Final Environmental Assessment (EA), dated October 2021, for the Prado Dam Gasline Removal Project evaluates the potential impacts associated with issuing a permit to Southern California Gas Company (SCG) to relocate an existing natural gasline within Prado Dam Basin in Riverside County, California.

The gasline's current location conflicts with the Prado Dam Spillway Modification Project. It needs to be relocated away from the spillway and dam in order to facilitate construction and ensure the integrity of the foundation of the dam. The project consists of two main phases: 1) removing or grouting in place portions of the existing gasline, and 2) installing new pipe segments along a new alignment. Construction for the gasline relocation is currently scheduled to begin mid-October 2021 and is planned to end in Spring 2022.

The Final EA, incorporated herein by reference, evaluates two alternatives: The No Action Alternative, under which the Corps does not update or issue a new license agreement and the gasline is not removed and relocated; and the Proposed Action Alternative, in which the gasline is removed and relocated allowing for the construction of the Prado Dam Modification Project.

Potential effects were evaluated for both alternatives. A summary assessment of the potential effects of the recommended plan are listed in Table S-1:

**Table S-1: Summary of Potential Effects of the Recommended Plan**

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic resources/wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fish and wildlife habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Insignificant effects	Insignificant effects as a result of mitigation*	Resource unaffected by action
Threatened/Endangered species/critical habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic properties	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other cultural resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous, toxic & radioactive waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hydrology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land use	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socio-economics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tribal trust resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan, which includes environmental commitments. Of particular importance, vegetation removal must be performed between September 15<sup>th</sup> through February 15<sup>th</sup>, portable sound walls will be used during August 15<sup>th</sup> through February 15<sup>th</sup>, and open trench segments will have the gasoline quickly placed and buried. If the gasoline is unable to be backfilled quickly, then protection measures will be put in place to protect wildlife and workers. Standard stormwater pollution prevention plan measures would be employed to prevent any adverse impact to the adjacent channel during construction as well as dust control measures. If unknown contaminants are discovered, Project activities would be halted and procedures for notification would be followed. Construction and operation of the proposed project shall comply with known noise standards and with Federal, state, and local laws and ordinances.

The Corps will require SCG to restore all areas that are disturbed by the project. SCG will be required to conduct offsite restoration at a 1:1 ratio for every acre of impacted native upland habitat. A biological monitor will be required to monitor noise regularly during the nesting season (February 15<sup>th</sup> – August 15<sup>th</sup>). The Corps will require SCG to offset impacts at a 1:1 ratio per any period during the breeding season affected by such noise levels.

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the Corps determined that the proposed gasline removal may result in a "May Adversely Affect" determination for the least Bell's vireo (*Vireo bellii pusillus*), California gnatcatcher (*Poliioptila californica californica*) and a "Not Likely to Adversely Affect" determination for least Bell's vireo critical habitat. The Corps formally consulted with U.S. Fish and Wildlife Service (USFWS) on June 24<sup>th</sup>, 2021 and provided a Biological Assessment. USFWS concurred with the Corps determination that the proposed Project is "Not Likely to Adversely Affect" designated vireo critical habitat. USFWS also concluded the proposed activities are not likely to jeopardize the continued existence of the least Bell's vireo or coastal California gnatcatcher. USFWS issued a Biological Opinion to the Corps on September 17, 2021 (Appendix F) completing formal consultation.

The draft EA and public notice were posted to the Corp's public website from August 17, 2021 to September 16, 2021. No additional comments were received.

The Proposed Action also remains consistent with the overall project's existing programmatic agreement (PA) prepared under the National Historic Preservation Act. Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, a PA was executed for the Santa Ana River Mainstem Project (SARMP) in 1993 by the Corps, State Historic Preservation Officer, and the Advisory Council on Historic Preservation (Appendix D). The PA details the procedures to be followed for each feature of the project. Under the Proposed Action, no additional consultation is required for this utility removal and relocation.

No work would occur within the Santa Ana River, and indirect impacts would be avoided through the implementation of standard stormwater protection measures; therefore, no 404 Permit would be required for this action. The proposed project is in compliance with the Clean Water Act.

All applicable laws, executive orders, regulations, and local government plans were considered in the evaluation of alternatives. Based on the EA, the reviews by other Federal, State and local agencies, Tribes, the input of the public, and the review by my staff, it is my determination that the recommended plan would not have a significant effect on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

12 OCT 2021

DATE

 Digitally signed by David Miller  
Date: 2021.10.12 16:33:20  
-07'00'

Julie A. Balten  
Colonel, U.S. Army  
Commanding

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- A. Air Quality Analysis Calculations
- B. Environmental Justice Screener Report
- C. Seed Mix
- D. Programmatic Agreement
- E. Biological Assessment (BA)
- F. Biological Opinion (BO)

## **SECTION 1 – INTRODUCTION**

This Final Environmental Assessment (EA) has been prepared by the U.S. Army Corps of Engineers (Corps) to evaluate the potential impacts associated with the Corps permitting Southern California Gas Company (SCG) to relocate an existing natural gasline. The gasline is located in an easement on the federal Prado Flood Control Basin property in Riverside County, California (**Figure 1**). The Corps is preparing to construct improvements at Prado Dam (see Section 1.2) and the gasline's current location conflicts with these construction efforts.

This EA has been prepared to meet the National Environmental Policy Act (NEPA) requirements. This EA is intended to serve as the primary environmental document for all actions associated with the project, including all discretionary, requested, or required approvals to implement the project. It is intended to serve as an informational document for the decision makers and the public regarding the objectives, the project components, and any potentially significant environmental impacts that may be associated with the planning, construction, operation, and maintenance of the project components. This document also identifies appropriate feasible mitigation measures that have been adopted to reduce or eliminate these impacts. This document, therefore, provides sufficient analysis to determine the potential for significant impacts among the various project components, as well as suitable mitigation measures to reduce these impacts, when appropriate.

### **SECTION 1.2 – PURPOSE AND NEED**

The Santa Ana River Mainstem Project (SARMP) is a comprehensive flood risk management system authorized for construction by Section 401(a) of the Water Resources Development Act of 1986. The Prado Dam Spillway Modification is the last major component of the Prado Dam element of SARMP. The existing gasline location conflicts with the Prado Dam Spillway Modification project and needs to be relocated away from the spillway and dam in order to facilitate construction and ensure the integrity of the foundation of the dam.

## **SECTION 2.0 – PROJECT DESCRIPTION**

### **SECTION- 2.1 PROJECT LOCATION**

The project area is located in the City of Corona, Riverside County, California adjacent to the Santa Ana River (Prado Dam Outlet Channel). The project area is bordered by State Route 71 (SR-71) to the west, State Route 91 (SR-91) to the south, and the Prado Dam Embankment to the north (**Figure 2**). The current gasline runs north of the spillway and along the south side of the Dam Embankment (**Figure 3**). The spillway is directly adjacent to Prado Dam Embankment and the Prado Dam Outlet Channel.

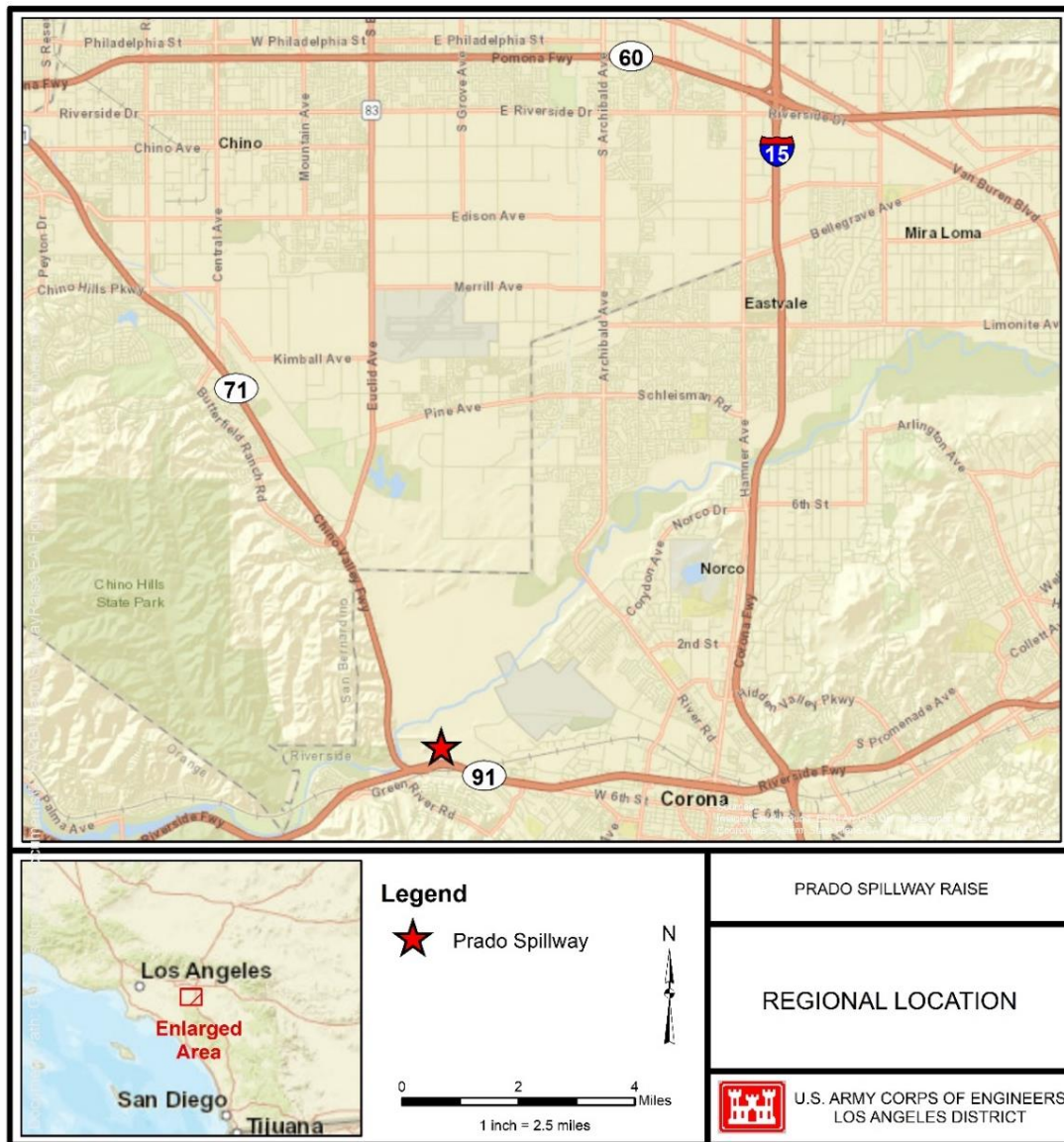


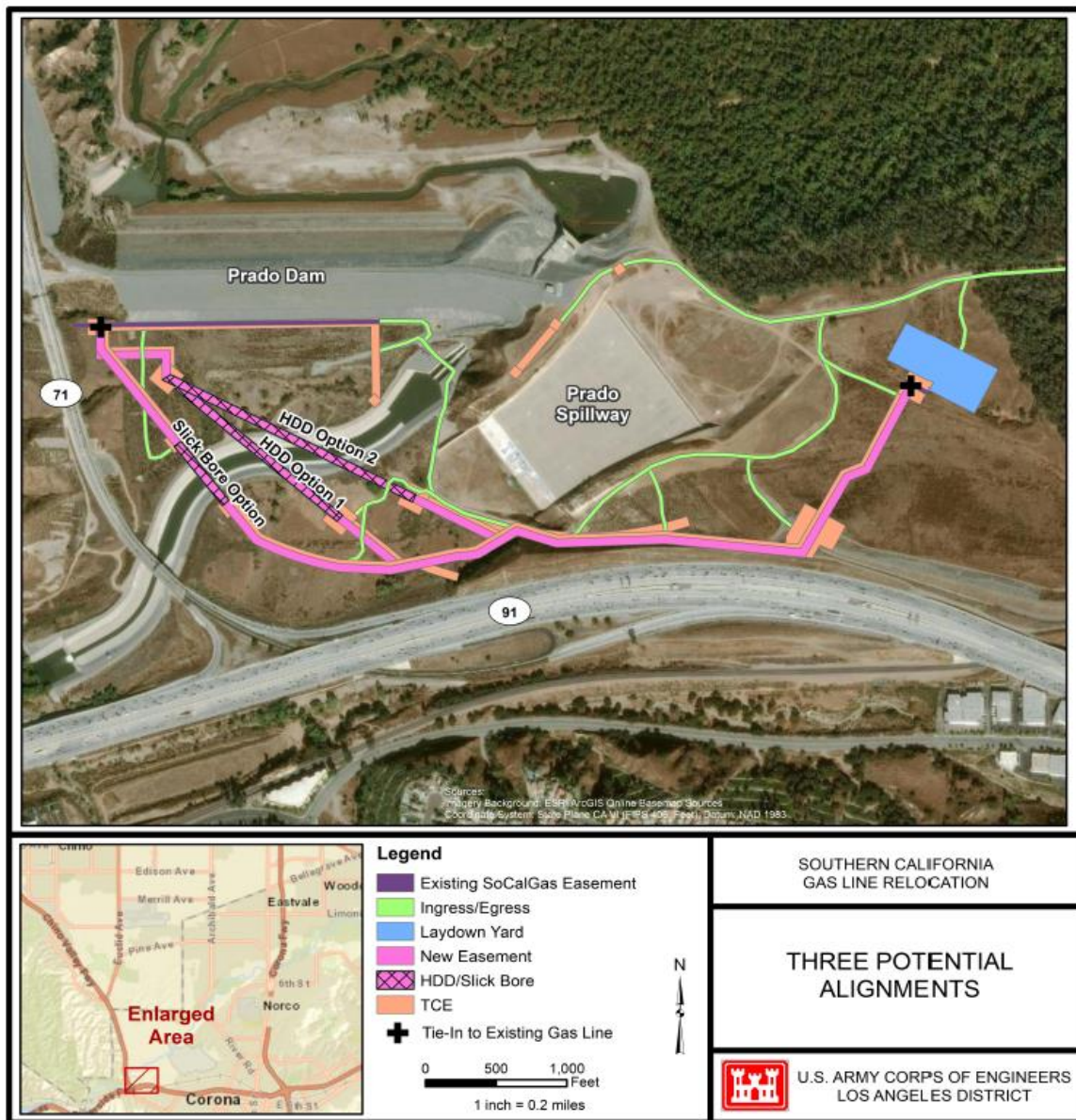
Figure 1. Regional Map

**SECTION- 2.2 ALTERNATIVE REJECTED FROM CONSIDERATION**

Three different alignments were evaluated based on feasibility and the amount of environmental impact (Figure 2). Each alignment would require a different construction methodology and would use a combination of open trenching and horizontal directional drilling (HDD). HDD is a trenchless method of installing pipe or cable by tunneling underground. The difference in effects between the three possible alignments are primarily related to differences in the amount or length of open-cut trenching required, as well as the type of habitat within each footprint. The Slick Bore option was eliminated first, as it would cause the most environmental impact and was the least feasible. It would require the most trenching and the least amount of HDD (which reduces ground disturbance). Furthermore, the slick bore option would require a deep tunnel which would hit a substantial amount of ground water. HDD Option-2 was eliminated because it was considered too close to the spillway and could be damaged by scour during a large flow event. Two options were eliminated leaving the preferred alignment which



is further discussed in this document. HDD Option-1 was further refined to avoid any impacts to riparian habitat (**Figure 4**).



**Figure 2. Three Proposed Alignments**

**SECTION – 2.3 PROPOSED ACTION**

Under the Proposed Action, the Corps would execute a License with SCG to provide access for the removal of a portion of the gasline, as well as access for the relocation. The Corps will amend the existing Licensing agreement which will capture the new gasline alignment within Corps property. The preferred alignment selected is the refined HDD Option 1 (**Figure 4**). SCG will be responsible for the cost to remove and relocate the gasline away from the Prado Dam spillway and dam. The Proposed Action would meet the need and purpose.

**SECTION – 2.4 NO ACTION ALTERNATIVE**

In the no action alternative, the Corps would not issue necessary Licenses to SCG or updated the existing agreement therefore, SCG would not remove the gasline and no associated earthwork to relocate the gasline would occur. Because the gasline is not removed from the close vicinity of the spillway, the spillway raise project cannot occur and the risk for the spillway to erode or the chute slab to lift during a large flooding even would remain high. Therefore, the no action alternative would not meet the purpose and need.

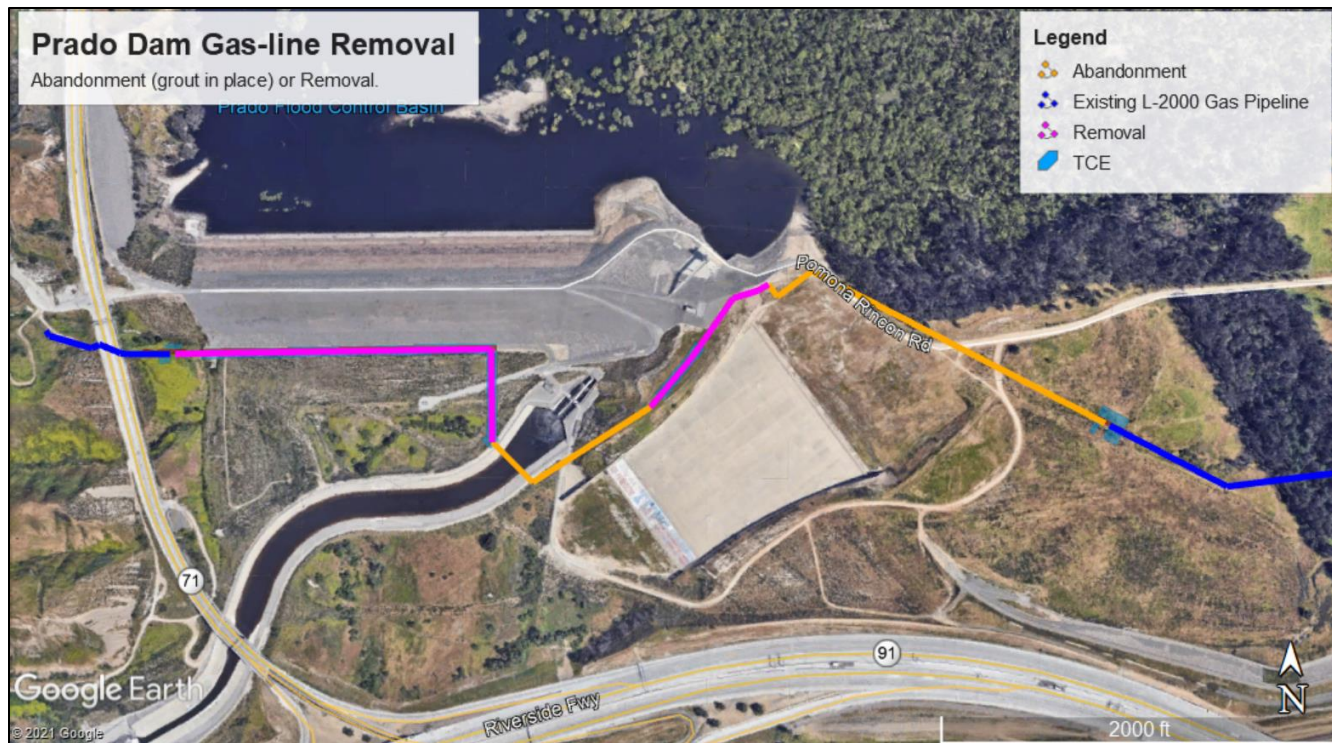
### **SECTION – 2.5 PROJECT DESCRIPTION**

The proposed action consists of two main phases: 1) removing or grouting in place the old gasline (**Figure 3**) and 2) relocating the new gasline (**Figure 4**). “Relocation” refers to the installation of a new gasline in a different alignment; the existing gasline would not be moved to a new location.

#### **Removing or Grouting In-Place**

Removal is planned for the portions of the existing gasline at the toe of the dam and sections near but outside of the Prado Dam Outlet Channel (**Figure 3**). Sections of gasline to be removed would be tested for asbestos before removal. No asbestos is anticipated to be found based on the type of pipe that was installed, but in the rare possibility that a segment of the gasline tests positive for asbestos, remediation would occur (Section 4.2, environmental commitment # 19). The soil removed would be backfilled.

Partial abandonment of the gasline is proposed to reduce excavations in the vicinity of the Prado Dam Outlet Channel and prevent damage to the outlet channel lining. Ground disturbance is anticipated only at the beginning and ending of the portion of gasline that will be grouted in place. Portions of the gasline that will be abandoned in place would be inspected, cleaned, and filled with grout according to federal guidance (FEMA 2005). If the gasline is deteriorated or damaged and cannot be safely grouted, a new abandonment approach would be developed. Based on geotechnical analyses performed by SCG, the gasline that would be left in place would not create a hazard or leach any contaminants into the soil.



**Figure 3. Existing Gasline and Proposed Grout in Place and Gasline Removal**

### Relocation of New Gasline

The new gasline installation would connect from an existing (unaffected) gasline segment located on the east side of the spillway, extending south of the spillway along the 91 freeway, crossing under the Prado Dam Outlet Channel and connecting back to the existing gasline near the SR-71. The majority of the new gasline installation (0.91 miles) would occur via surface excavation utilizing a 6' wide and 7' deep trench.

A shorter portion of the new gasline (0.25 miles) would be installed using HDD. HDD would involve drilling a tunnel underneath the Prado Dam Outlet Channel at a 15-degree angle to install the new gasline. The alignment of the relocated gasline may be minimally refined to avoid impacts to existing riparian habitat (see Section 4.3 for details), but this minimal refinement would not result in any additional impacts.

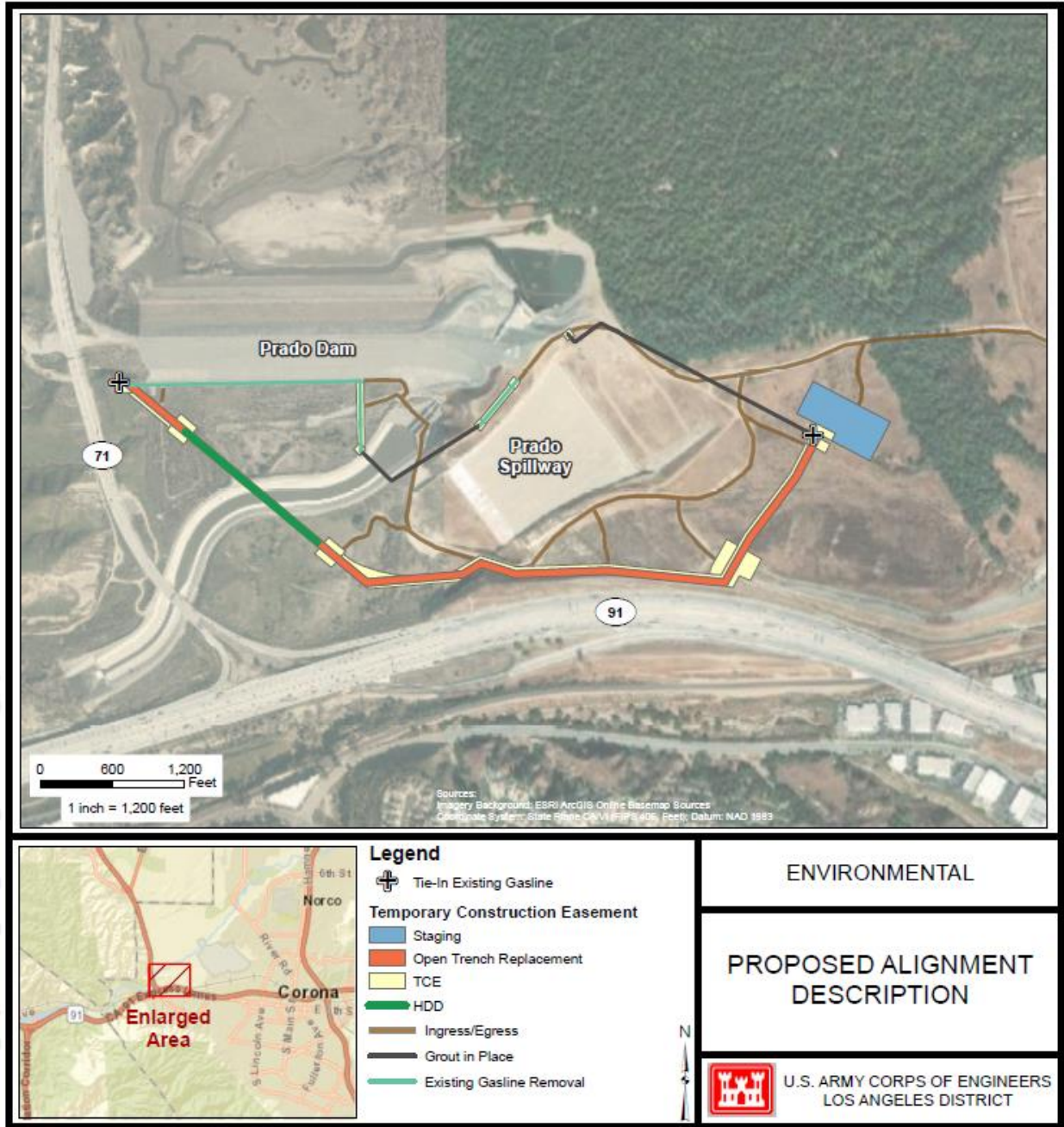


Figure 4. Proposed Alignment

**2.5.1 Staging, Temporary Construction Easement (TCE) and Access Routes**

A 3.77-acre laydown yard utilized for the staging of construction materials and equipment is planned on an open area northeast of the spillway (Figure 4). Already-established roads will be used to drive equipment to staging area. This project does not require a borrow site. A Temporary Construction Easement (TCE) is a temporary right to perform construction on the property of another party. A 75' wide TCE around the trench would be necessary to facilitate access to heavy machinery and stockpile excavated soils temporarily. Temporarily stockpiled soil would be reused to cover the new gasline, fill in areas where gasline is removed permanently, or graded within the TCE. The TCE also includes

several other minor areas required to facilitate construction-related tasks (e.g., vehicle access, gasline fabrication, etc.) outside of the 75' wide corridor, as illustrated in **Figure 4**. The gasline will be installed in sections and open trench segments will have the gasline quickly placed and buried. If the gasline is unable to be backfilled quickly, then protection measures will be put in place to protect wildlife and workers (section 4.2, environmental commitment # 23). No new roads will be created, and crew members will use existing maintenance roads for access.

### **2.5.2 Schedule & Timing**

Construction is scheduled to begin in mid-October 2021 and is planned to end in mid-April 2022. Vegetation removal within the TCE would occur between September 15<sup>th</sup> and February 15<sup>th</sup>.

Most of the work will be done from 7 am to 5 pm except under two conditions. The first condition would be during HDD pullback, which is when the gasline would be pulled through the HDD tunnel. This must be completed as quickly as possible, so the tunnel does not collapse. This work would take 24 to 48 hours to complete. The second condition is during the gasline tie-in, which is when the new gasline is being reconnected with the existing gasline. The gas must be shut off during this time, therefore the work will be done as quickly as possible but could take 24 to 48 hours to complete. For both HDD pullback and tie-in, multiple mobile light towers will be required to maintain a safe work environment for nighttime work. Lights will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement (4.2, environmental commitment # 13).

### **2.5.3 Maintenance and Operations**

Typical operations and maintenance of the gasline are minor and infrequent. SCG performs typical leak detection inspections either via drone or truck, depending on access. Inspections occur on an infrequent basis, about every 5-7 years. An inspection typically does not cause any disturbance above ground as the gasline is inspected via an internal tool. Per California Fire Marshal regulation, SCG is required to have quick access to their gasline in case of emergency. For these kinds of emergencies, existing access is sufficient.

**2.5.4 Construction Equipment** A variety of heavy equipment will be necessary to facilitate construction, including forklifts, excavators, dozers, backhoe, graders, generators, cranes, dump trucks, and various trucks for hauling and site access.

## **SECTION 3.0 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

This section provides a discussion of the affected environment and assessment of potential impacts associated with the Proposed Action and no action alternatives. Only the resources relevant to this EA are analyzed. These resources include Water Resources and Hydrology, Air Quality, Biological Resources, Cultural Resources, and Hazardous Materials.

### **SECTION – 3.1 Hydrology, Groundwater, Water Quality, and Wetlands**

#### **SECTION – 3.1.1 Affected Environment.**

**Hydrology:** The Santa Ana River conveys flows southwest throughout the project area in a channelized outlet. The Santa Ana River Basin is the largest watershed in southern California, with a drainage area of about 2,670 square miles. The watershed is separated into an upper and a lower basin divided by Prado Dam and Reservoir. The Santa Ana River originates in the San Bernardino Mountains and travels southwest approximately 60 miles where it reaches the Pacific Ocean near Huntington Beach. Urban runoff and effluent from wastewater treatment plants, as well as naturally occurring high groundwater levels, contribute substantially to the perennial flow that occurs in the Prado Basin and the project area.

**Groundwater:** Groundwater is the main source of water supply in the Santa Ana River watershed, providing about 66 percent of the consumptive water demand. Inland aquifers underlie roughly 1,200 square miles of the watershed upstream of Prado Dam, while coastal aquifers underlie roughly 400 square miles downstream of Prado Dam. Depth to groundwater ranges from several hundred feet below the ground surface near the mountains to near land surface along rivers, wetlands, and in the coastal plain. Groundwater varies throughout the year but geotechnical investigations performed in February 2021 found groundwater at around 28.5 feet deep near the proposed alignment.

**Water Quality:** Section 303(d) of the Clean Water Act (CWA) authorizes the Environmental Protection Agency (EPA) to assist states in identifying impaired waters and identifying maximum pollutant discharges (i.e., Total Maximum Daily Loads or TMDLs) in an effort to restore water quality. Several waterways in the vicinity of Prado Dam are listed as impaired on the state's 303d list and have associated TMDLs. Portions of Chino and Mill Creek (tributaries just upstream of Prado Dam) are listed as impaired for pollutants such as pathogens. Portions of the Santa Ana River mainstem upstream of Prado are listed for high coliform, while portions downstream of Prado Dam are listed for high nitrates. These pollutants most likely originate from non-point agricultural and urban sources that commonly occur throughout the watershed.

**Jurisdictional Waters and Wetlands:** Section 404 of the CWA regulates the discharge of dredge or fill material in waters of the U.S., while Section 401 regulates water quality within waters of the U.S. To determine whether jurisdictional waters or wetlands (i.e. waters of the U.S.) occur within the project area, we first consulted the USFWS Wetlands Mapper (<https://www.fws.gov/wetlands/data/>

[mapper.html](#)). While the wetland mapper indicates the presence of a riverine feature (**Figure 5**), this mapping is not accurate. No wetland feature exists here based on field visits, aerial imagery, the lack of riparian vegetation, and no ordinary high-water mark. Water may run along the base of the hill from the culvert on the upper left-hand side, but not enough water is present to support wetland plant species or other aquatic resources. The vegetation present in the incorrectly mapped riverine area is coastal sage scrub. NWI most likely maps a river there because that was the previous location of the Prado Embankment Outlet Channel. Originally the outlet was at the base of that hill on the left-hand side of the dam which was later moved to its current location. Within the project footprint, the Santa Ana River is considered waters of the U.S. However, because the gasoline will go underneath the channelized outlet, no discharge into jurisdictional waters would occur.

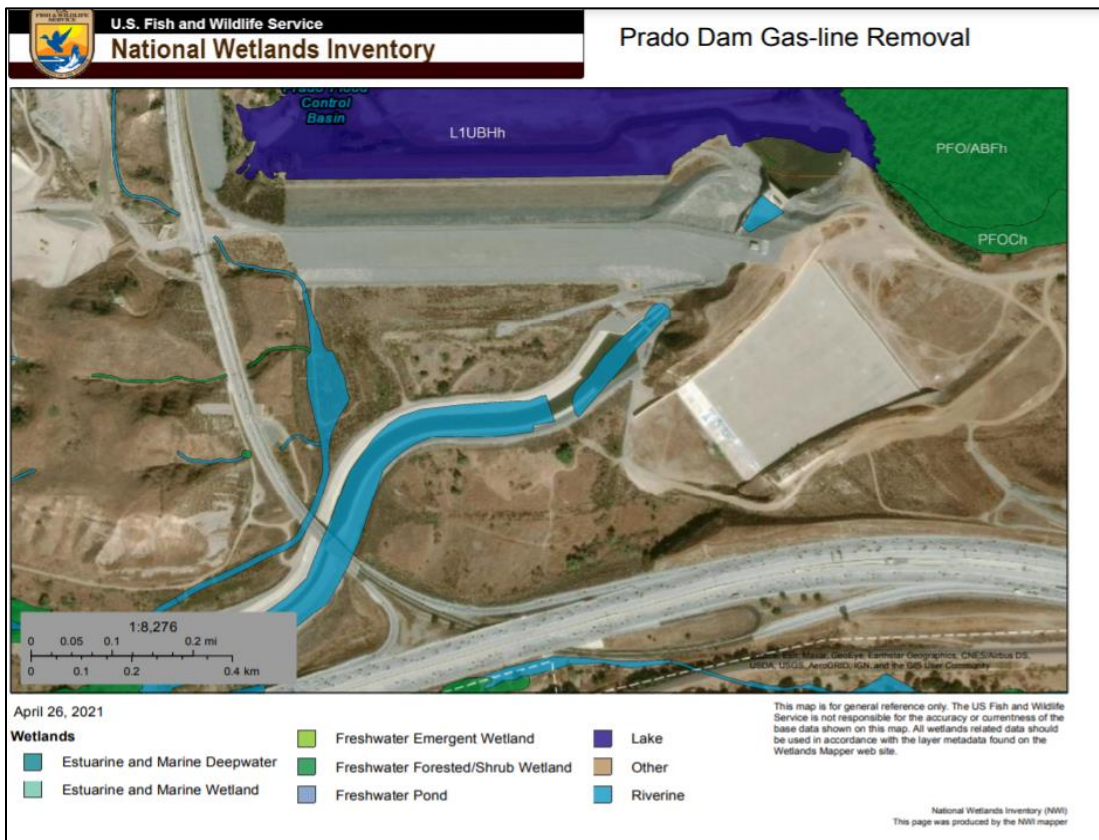


Figure 5. National Wetland Inventory Map

### SECTION – 3.1.2 Environmental Consequences

**Significance Criteria.** Impacts would be considered significant if the alternative caused:

- Substantial changes to the capacity or characteristics of the main flow path(s) of the river or capacity of the overall floodplain or changes in the velocity that would lead to greater erosion or deposition, runoff, flooding; or
- An increase in the demand for surface water in areas with existing shortages; and/or
- A violation of any applicable water quality or effluent standards or an impairment of designated beneficial uses; and/or

- A substantial reduction in the ability to recharge the underlying aquifer or substantial groundwater contamination or groundwater depletion.

**Proposed Action.** Under the Proposed Action, no construction-related impacts would occur to any jurisdictional waters or wetlands. The gasline would be installed about 45 feet underneath the Santa Ana River (for a total depth of 65') using HDD, avoiding all impacts to surface water resources. HDD would not change the flow of the Santa Ana River, change the capacity or overall floodplain, and would not affect velocity. Therefore, no impacts to hydrology are anticipated. The geotechnical investigations conducted in February 2021 found groundwater at around 28.5 feet deep and the HDD would most likely tunnel through groundwater. However, the tunnel would not require any sort of slurry mixture that could potentially contaminate groundwater. Therefore, substantial groundwater contamination is not expected to occur. The proposed action would not substantially reduce the ability to recharge the underlying aquifer since the newly installed gasline will be covered with soil, and the gasline would not significantly reduce the permeability of the ground. Therefore, potential effects on groundwater would be less than significant.

HDD drilling under the Santa Ana River will avoid any potential direct impacts to water quality, effluent standards, or beneficial uses. Implementation of BMPs and preparation of a Stormwater Pollution Prevention Plan (SWPPP) would avoid and minimize potential indirect effects to surface water quality, effluent standards, and beneficial uses (Section 4.2, environmental commitment #7). Therefore, potential effects on surface water and water quality would be less than significant.

**No Action Alternative.** Under the No Action Alternative, there would be no tunneling underneath the Santa Ana River. There would be no impacts to hydrology, groundwater, water quality or jurisdictional waters and wetlands. However, the purpose and need will not be met.

## **SECTION – 3.2 Air Quality**

### **SECTION – 3.2.1 Affected Environment**

The project area is located in the central part of the South Coast Air Basin (SCAB) of California, an approximate 6,600 square mile (mi<sup>2</sup>) area encompassing Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. Air quality in the SCAB is regulated the South Coast Air Quality Management District (SCAQMD).

### **National Ambient Air Quality Standards**

The federal Clean Air Act identified and established the National Ambient Air Quality Standards (NAAQS) for a number of criteria pollutants in order to protect the public health and welfare. The criteria pollutants include ozone (O<sub>3</sub>), carbon monoxide (CO), suspended particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead (Pb). PM emissions are regulated in two size classes: Particulates up to 10 microns in diameter (PM<sub>10</sub>) and particulates up to 2.5 microns in diameter (PM<sub>2.5</sub>).



A region is given the status of “attainment” or “unclassified” if the NAAQS have not been exceeded. A status of “nonattainment” for particular criteria pollutants is assigned if the NAAQS have been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a “maintenance area,” indicating the requirement to establish and enforce a plan to maintain attainment of the standard.

### **General Conformity Rule**

Section 176I of the federal Clean Air Act states that a federal agency cannot issue a permit for, or support an activity within, a nonattainment or maintenance area unless the agency determines it will conform to the most recent U.S. Environmental Protection Agency-approved State Implementation Plan (SIP). Thus, a federal action must not:

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.
- Delay the timely attainment of any standard, interim emission reduction, or other milestone.

A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by the Federal action would equal or exceed rates specified in 40 C.F.R. 93.153. The SCAB is currently in extreme nonattainment for ozone (precursors: VOC or NO<sub>x</sub>); nonattainment for PM<sub>2.5</sub>; attainment/maintenance for PM<sub>10</sub>; attainment/maintenance for NO<sub>2</sub>; and attainment/maintenance for CO; and nonattainment for lead (**Table 1**). Based on the present attainment designation for the SCAB, a Federal action would conform to the SIP if annual emissions are below 100 tons of PM<sub>2.5</sub>, 10 tons of VOC or NO<sub>x</sub>, or 25 tons of lead.

In addition to demonstrating compliance with the CAA, General Conformity Rates applicable to the SCAB are also used as significance thresholds for purposes of evaluating environmental impacts under NEPA.

**Table 1. NAAQS Attainment Designation and General Conformity Applicability Rates**

Pollutant	NAAQS Attainment Designation	General Conformity Applicability Rates (tpy)
Ozone (VOC as precursor)*	Nonattainment (Extreme)	10
Ozone (NO <sub>x</sub> as precursor)*	Nonattainment (Extreme)	10
Carbon Monoxide (CO)	Attainment (Maintenance)	100
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment (Maintenance)	100
Particulate Matter (PM <sub>10</sub> )	Attainment (Maintenance)	100
Particulate Matter (PM <sub>2.5</sub> )*	Nonattainment (Serious)	70
Lead (Pb)	Attainment	25
Sources: 40 CFR 93.53(b)(1) and 40 CFR 93.53(b)(2) VOC = Volatile Organic Chemical		

tpy = tons per year

\* non-attainment pollutants assessed for compliance with General Conformity Rules

### *Greenhouse Gas Emissions*

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Currently, there are no Federal standards for GHG emissions and no Federal regulations have been promulgated. The CEQ issued guidance on the consideration of GHG emissions, entitled Final Guidance for Federal Departments and Agencies on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, dated August 1, 2016, which established a recommended reference point of 25,000 metric tons of annual CO<sub>2</sub> emissions as warranting further review. Pursuant to Executive Order 13783, Promoting Energy Independence and Economic Growth, signed on March 28, 2017, the CEQ withdrew its guidance on April 5, 2017.

Therefore, a GHG significance threshold to assess impacts is not proposed. Rather, in compliance with NEPA implementing regulations, estimated emissions are disclosed for each alternative without expressing a judgment as to their significance within the context of GHGs.

### **Emission Estimates Methodology**

Emissions were estimated using CalEEMod.2020.4.0 emission modeling software, the California Air Resources Board-approved emissions modeling software used by all air districts in California.

Estimates of lead emissions were not calculated. Lead emissions from mobile sources in California have significantly decreased due to the near elimination of lead in fuels. Little to no quantifiable and foreseeable lead emissions would be generated by any of the alternatives. Thus, CalEEMod.2020.4.0 does not calculate lead emissions.

Ozone (O<sub>3</sub>) formation is driven by two major classes of directly emitted precursors: nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC). The relation between O<sub>3</sub>, NO<sub>x</sub> and VOC is driven by complex nonlinear photochemistry. Due to the variability in rates of O<sub>3</sub> formation, CalEEMod.2020.4.0 does not provide estimates for the compound. Instead, the emission estimates for VOC and NO<sub>x</sub> are used as a surrogate for reporting O<sub>3</sub> emissions per the General Conformity Applicability Rates. Since the consumption of VOC or NO<sub>x</sub> in O<sub>3</sub> formation reaction is variable, actual O<sub>3</sub> levels are lower than those reported

General Conformity Rule makes a distinction between NO<sub>x</sub> as an ozone precursor and NO<sub>2</sub> for reporting purposes. CalEEMod.2020.4.0 has emission factors for NO<sub>x</sub> but not for NO<sub>2</sub>. Because NO<sub>2</sub>, a form of NO<sub>x</sub>, forms the majority of NO<sub>x</sub> emission from internal combustion engines, estimated emissions of NO<sub>x</sub> are used as a surrogate for NO<sub>2</sub> emissions.

Additional details on methodology and assumption are documented in the Air Quality Appendix (**Appendix A**).

**SECTION - 3.2.2 Environmental Consequences.**

**Significance Criteria.** An impact to Air Quality will be considered significant if the Proposed Action would:

- Exceed General Conformity Rule de minimis thresholds.

**Proposed Action:** The proposed action would result in construction activities involving use of on-road and off-road equipment. Major off-road equipment includes generators, excavators, loaders, tractor/ crawlers, graders, compressors and off-highway trucks. On-road equipment primarily consists of 18-wheel trucks with low bed trailers for delivery of construction equipment. Construction would occur over an approximately 122-day period from 2021 through 2022. Estimated emissions are less than the General Conformity applicability rates (**Table 2**). Thus, impacts would be less than significant.

**Table 2 Estimated Emissions: Proposed Action**

<b>Pollutant</b>	<b>General Conformity Applicability Rates (tpy)</b>	<b>2021 (tpy)</b>	<b>2022 (tpy)</b>
Ozone (VOC as precursor)	10	0.03	0.07
Ozone (NO <sub>x</sub> as precursor)	10	0.32	0.69
Carbon Monoxide (CO)	100	0.26	0.63
Nitrogen Dioxide (NO <sub>2</sub> )	100	0.32	0.69
Particulate Matter (PM <sub>10</sub> )	100	0.01	0.03
Particulate Matter (PM <sub>2.5</sub> )	100	0.01	0.03
Lead (Pb)	25	n/a	n/a
GHG*	n/a	51	127
tpy = tons per year *GHGs are not part of the General Conformity Rates and are not evaluated under NEPA but are included in this table for disclosure purposes only.			

General Conformity Rule Compliance: Estimated emissions for all construction years would not exceed applicable General Conformity Rates. As a result, a General Conformity Analysis would not be required and the proposed action would be in compliance with the General Conformity Rule.

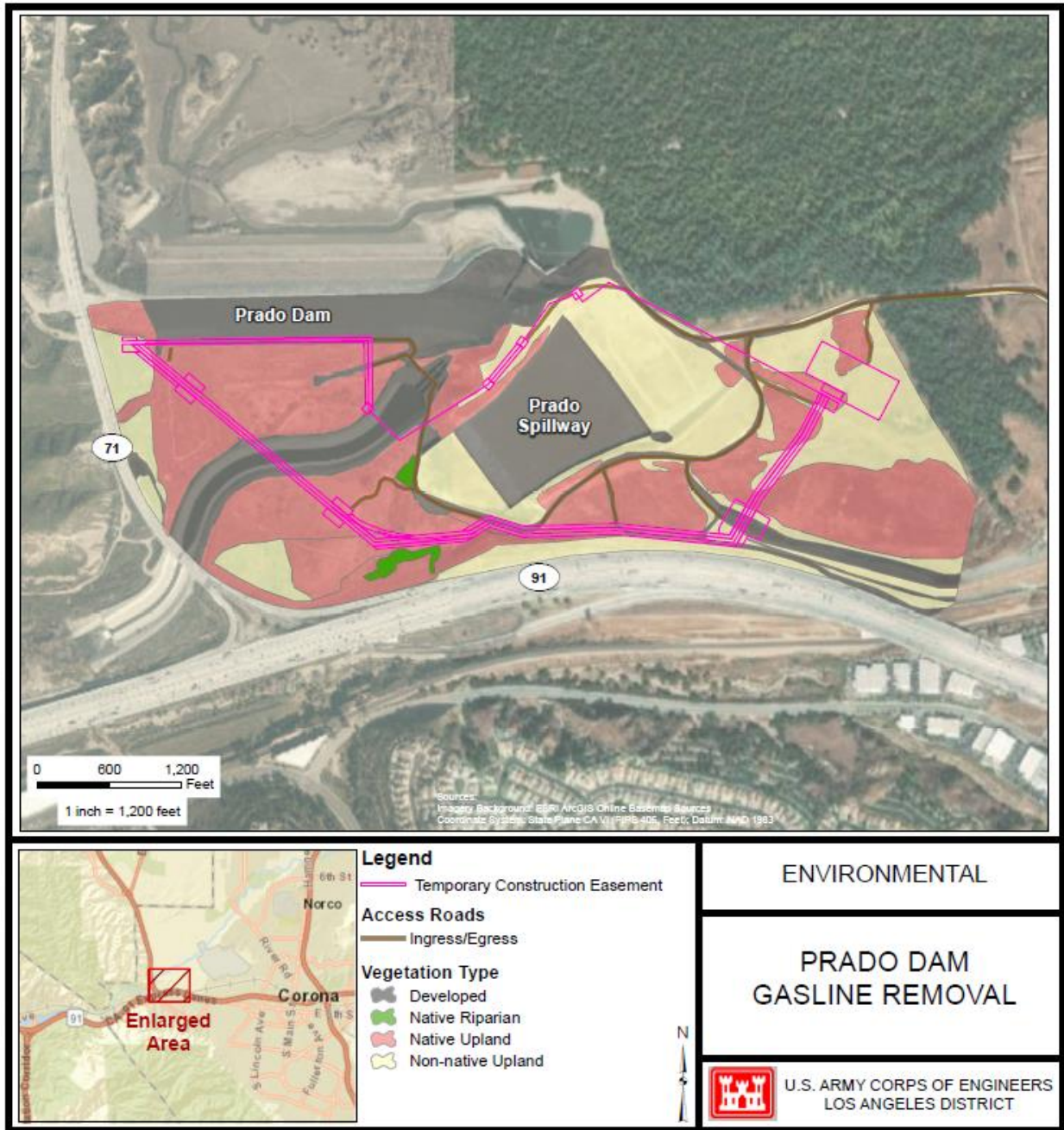
**No Action Alternative:** Under the No Action Alternative, the existing gasline would not be relocated and no air emissions from equipment would be produced. The gasline would not be removed and relocated, therefore, the No Action Alternative would not meet the purpose and need.

**SECTION - 3.3 Biological Resources**

**SECTION - 3.3.1 Affected Environment**

The project area and adjacent habitat have been surveyed by biologists from the Santa Ana Watershed Association (SAWA), Orange County Water District (OCWD), and Aspen Environmental Group to document the presence and locations of protected and sensitive biological resources.

**Vegetation:** Most of the project area's vegetation was surveyed by Aspen in 2020 and the remainder of the project area was mapped by an expert biologist familiar with the area and its vegetation. These surveys identified four primary cover types in the project area (**Figure 6**), as described in detail below. The native and disturbed vegetation communities are interspersed; therefore, breaks in community type were determined based on dominant species type and professional judgment of the biologist surveying.



**Figure 6. Vegetation Map**

**Coasal Sage Scrub (Native Upland):** Upland vegetation in the project area is best classified as coastal sage scrub (CSS) and is dominated by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and brittlebush (*Encelia farinose*). All native upland vegetation within the project area was restored as part of previous work at Prado Dam over the last

twenty years.

**Native/Riparian:** Riparian vegetation in the project area is dominated by cottonwood (*Populus* spp.) and willow (*Salix* spp.) species.

**Non-native Upland (ruderal species):** Non-native uplands within the project area are dominated by non-native grasses and herbs such as riggut brome (*Bromus diandrus*), foxtail brome (*Bromus madritensis* spp. *rubens*), wild oat (*Avena* spp.), wall barley (*Hordeum maurinum*), and Russian thistle (*Salsola tragus*). These species are widespread in and adjacent to the project area. Non-native uplands are present in patches surrounding the spillway and throughout much of the borrow area. Non-native uplands provide very little wildlife habitat.

**Developed / Disturbed:** Developed areas include the existing spillway, portions of Prado Dam, and a network of unpaved access roads throughout the project area. These developed areas are either unvegetated or sparsely vegetated with non-native species such as those discussed above under non-native uplands. Developed areas provided very little habitat for wildlife species.

**Special Status Species and Habitats:** The U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPAC) web portal identified eight special status species and habitats protected under the Endangered Species Act (ESA) as potentially occurring in the project area (see **Table 3** for impact determination). Based on existing survey data, only the least Bell's vireo (*Vireo bellii pusillus*) and Coastal California Gnatcatcher (*Polioptila californica californica*) occur within the project area and would potentially be affected by the proposed action (see **Appendix E** for details).

### **Coastal California Gnatcatcher (CAGN)**

The CAGN is listed as threatened under the ESA. They live in coastal sage scrub, desert scrub, and coastal dune scrub year-round. In California, they occur along the coast in areas dominated by California sage scrub. They generally occur in areas less than 1,600 feet in elevation, but sometimes occur at higher elevation at inland scrub sites. In Baja California and Mexico, they occur in sparse desert woodlands, coastal dune scrub, and desert scrub. During the non-breeding season, they may forage in chaparral areas especially if it borders sage scrub. The project area contains suitable coastal sage scrub habitat. The CAGN's diet includes leafhoppers, beetles, bugs, and spiders. Male CAGN select a nest site in sagebrush, buckwheat, or other shrub species and create the nest at about 2.5 feet high, typically on the outer edges.

### **Survey Results**

Annual surveys are conducted by SAWA in addition to the environmental consulting company, Aspen. The project area has supported approximately 12 CAGN territories in recent years. They both breed within the Prado Basin and live there during the non-breeding season. Preliminary 2021 data, provided by SAWA identified 4 territories within the project area. For impact analyses later in this section, potential impacts to CAGN are based on the maximum number of potentially impacted territories which

was found in 2020 (i.e. 12 CAGN territories).

**Least Bell's Vireo (LBVI):** The LBVI is listed as endangered under the ESA. The LBVI is a summer resident of Southern California where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet. The LBVI breeds in dense, shrubby riparian vegetation, often dominated by willows (Franzreb 1989). Nests are typically found in dense vegetation located low in the riparian zones, most frequently in 5- to 10-year-old stands. When LBVI nest in mature riparian woodlands, they nest in areas with a substantial, robust understory of willows as well as other plant species. LBVI generally prefer semi-complex riparian habitats that have understory scrub and ample vertical complexity; riparian areas with no understory are less likely to be used. In California, a dense shrub layer associated with riparian habitat was found to be the most critical structural component of occupied LBVI habitat (Kus et al. 2010). In more xeric areas, this species will readily utilize unconventional habitats, including mesquites and tamarisk. In riverine habitat, in Southern California, this species typically utilizes territory sizes of about 2 acres on average (Kus et al., 2010).

### **Survey Results**

Annual surveys for LBVI are conducted by SAWA. In 2020, SAWA reported a total of 719 territories in Prado Basin and a total of 2,293 territories in Santa Ana Watershed (SAWA 2020). Of the territories documented in 2020, approximately 3 were identified within the project area. Preliminary 2021 data, provided by SAWA identified 5 territories within the project area. For impact analyses later in this section, the higher number of potentially impacted territories from the 2021 survey has been utilized.

**Critical Habitat:** A portion of the project area is designated LBVI critical habitat (**Figure 7**). The physical and biological features (PBFs) of LBVI critical habitat that are essential to the conservation of the species can be described as riparian woodland vegetation the generally contains both canopy and shrub layers and includes some associated upland habitats (USFWS, 1994). Portions of the project area overlapping with LBVI critical habitat does not support these physical and biological features.

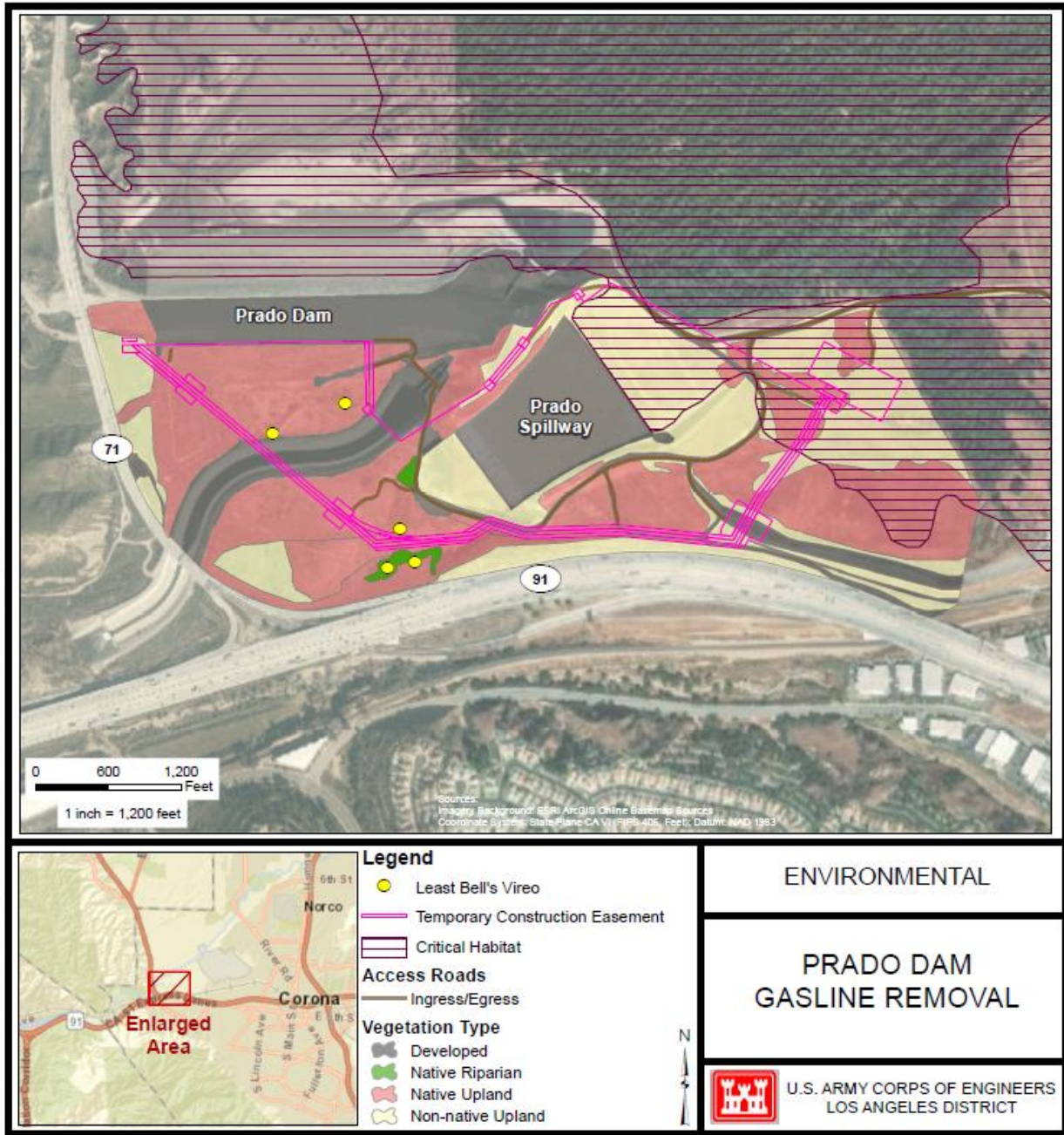


Figure 7. Designated Critical Habitat for Least Bell's Vireo.

### Wildlife Movement

Impacts to wildlife movement have been analyzed in areas west of the project area (primarily downstream of Prado Basin and in areas closer to the Prado Dam Embankment). The analysis primarily considered movement to/from the Cleveland National Forest and Chino Hills State Park. Key areas such as the east portion of the Prado Dam and vegetated ramps (specifically created for wildlife movement) are used as wildlife corridors.



**SECTI-N - 3.3.2 Environmental Consequences**

**Significance Criteria.** Impacts would be significant if the Proposed Action would cause:

- A direct, adverse effect on a population of a threatened, endangered, or candidate species or the unmitigated loss of designated critical habitat for a listed or candidate species, to the extent that the regional population is diminished;
- An unmitigated, net loss in the habitat value of a sensitive biological habitat or area of special biological significance;
- Substantial impedance to the movement or migration of fish or wildlife.

**Table 3. Federally Endangered or Threatened Species and Critical Habitat**

<b>Common Name</b>	<b>Habitat Requirements</b>	<b>Status</b>	<b>Corps' Determination</b>
San Diego Ambrosia ( <i>Ambrosia pumila</i> )	Found in a variety of habitats along the coastal strip, inland valleys, and foothills at elevations below 2,000 ft, near vernal pools and in disturbed areas. Does not tolerate shade.	E	No Effect. No suitable habitat present within the action area, and not detected during 2021 surveys.
Thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	Typically grows in herbaceous plant communities such as grassland communities, alkali playa, and in vernal pools. In some locations, thread-leaved brodiaea grows in open areas associated with coastal sage scrub.	T	No Effect. No suitable habitat is present within the action area, and not detected during 2021 surveys.
Delhi sands flower-loving fly ( <i>Rhaphiomid25erminatestus abdominalis</i> )	Found only in areas of the Delhi sands formation in southwestern San Bernardino and northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition requires shade.	E	No Effect. No suitable habitat is present within the action area. Not detected during 2021 surveys.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	Nesting summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, or mesquite.	E	May Adversely Affect
Least Bell's vireo Critical Habitat		D	May Affect, Not Likely to Adversely Affect
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Nesting habitat of riparian woodlands in southern California.	E	No Effect. No suitable habitat is present within the action area.

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Coastal California gnatcatcher ( <i>Poliophtila californica californica</i> )	Obligate, permanent resident of coastal sage scrub in southern California. Low, CSS in arid washes, on mesas and slopes. Not all areas classified as CSS are occupied.	T	May Adversely Affect
Santa Ana Sucker ( <i>Catostomus santaanae</i> )	Endemic to Los Angeles basin and south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	T	No Effect. All impacts to waters will be avoided by using horizontal directional drilling (HDD).
E = endangered, T = threatened, D = designated			

Source: USFWS IPAC Resources List

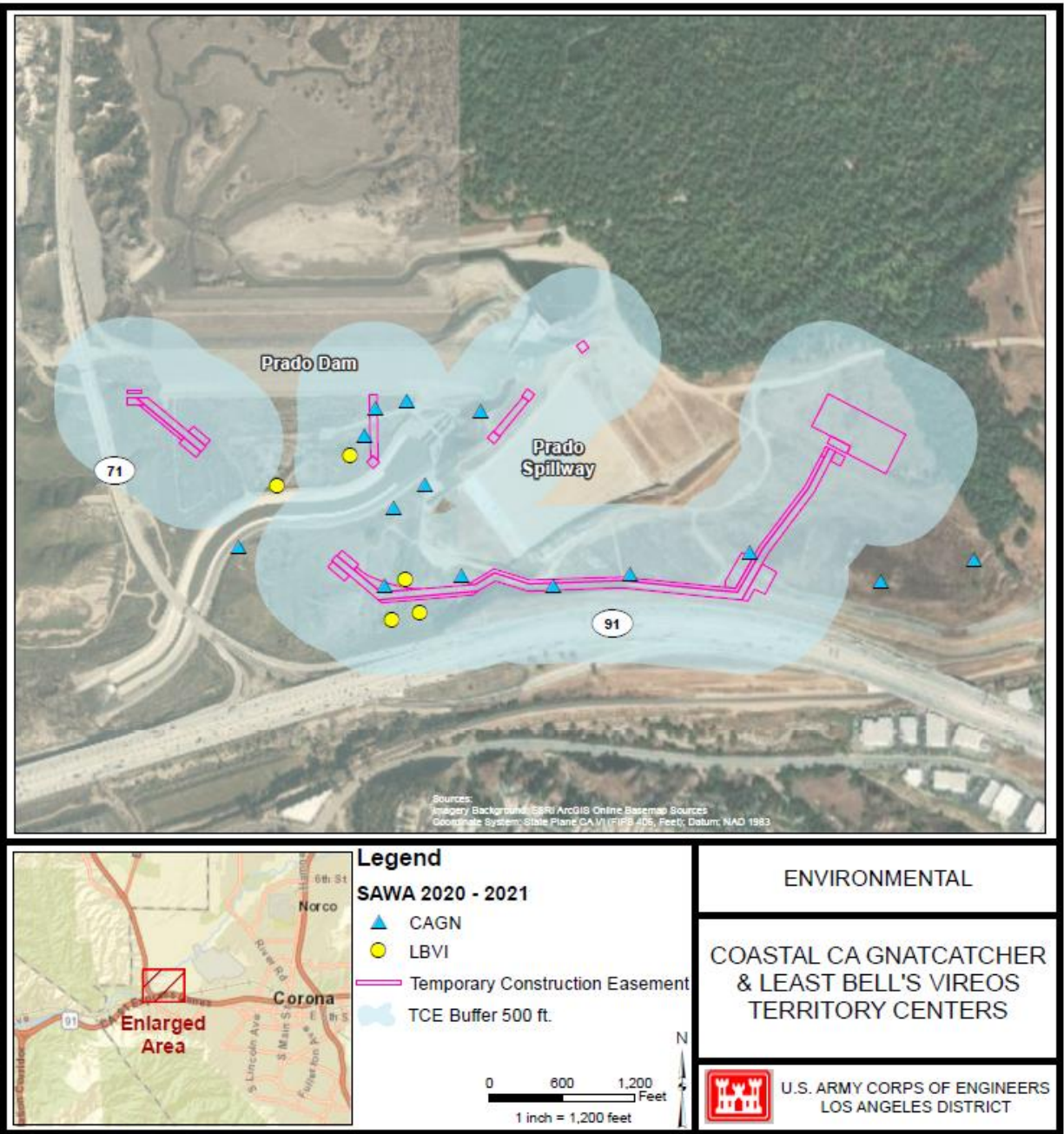
**Vegetation Impacts**

The proposed action would impact a total of 14.2 acres of vegetation, which includes 8.2 acres of coastal sage scrub (CSS) communities and six acres of non-native upland (**Table 4**). The direct impact to listed species from the removal of CSS and riparian within the TCE would result in the temporary displacement of 4 CAGN and 0 LBVI territories. Indirect and other effects to the species are discussed below. To reduce direct impacts to listed species, all vegetation removal will occur outside of nesting season between September 15 - February 15 (Section 4.2, Environmental Commitment #1). To offset temporal impacts caused by vegetation removal, offsite restoration for every acre of impact to CSS and riparian habitat would be required (Section 4.2, Environmental Commitment #6). In addition, all currently vegetated portions of the TCE will be restored with native habitat following construction (Section 4.2, Environmental Commitment #9). Because all disturbed areas will be restored in kind, there will be no unmitigated net loss in sensitive habitats, therefore, the impact is considered less than significant.

**Table 4. Summary of Vegetation Impacts**

Developed (Acres)	CSS Native Upland (Acres)	Non-native Upland (Acres)	Native Riparian (Acres)
1	8.2	6	0

*\* Temporary impacts do not include areas where work would occur underground only (HDD).*



**Figure 8. CAGN 2020 and LBVI 2021 Data** \*Only shows buffer around areas that will have above ground disturbance and produce noise impacts.

### California Gnatcatcher (CAGN)

Based on the type of activity, equipment and estimated noise levels (with sound reducing measures in place), direct (vegetation removal) and indirect (noise and disturbance) effects of the proposed action are expected to occur within a 500'-wide buffer surrounding each alignment. An excavator produces noise on average at about 87 decibels. The sound walls reduce sound by about 5 decibels and around 500 feet noise levels are around 60 decibels. Therefore, the proposed action would

potentially result in a temporary displacement of or indirect effect of up to 11 territories that occur within this 500'-wide buffer. Four of these territories occur within the direct footprint. Considering the large width of the floodplain, the movement of gnatcatcher would not be constricted with the adjacent area. While gnatcatchers may still be able to successfully forage and nest within the vicinity and possibly within the 500' buffer zone, this analysis assumes a temporary, adverse effect to all eleven of the previously established territories within this area.

Construction will continue past February 15<sup>th</sup> into CAGN nesting season (through at least April 2022). Most of the work that would occur during nesting season would likely be in a less suitable habitat (removal and abandonment portion of construction). Those areas have fewer CAGN and LBVI territories. Dust can create a visual impairment and degrade air quality and human presence can cause CAGN to abandon territories and nests. Increased competition for nest sites and other resources could occur until construction is completed and onsite and offsite habitat restoration occurs. The proposed action would temporarily impact 8.2 acres of well-established CSS communities.

To minimize potential effects to CAGN, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur throughout the duration of the construction activities. Work during nesting season will mainly be gasline removal and, abandon and grout in place. Portable sound walls will be required for work occurring between February 15<sup>th</sup> to August 15<sup>th</sup> of any year, and noise levels will be monitored during that time period (Section 4.2, environmental commitment #4). In addition, the Corps has committed to perform or require offsite noise mitigation for every acre of occupied CSS habitat that is exposed to noise levels exceeding 2 consecutive 8 hour workdays during each nesting season that the impact occurs at a 1 to 1 ratio (Section 4.2 Environmental Commitment #5). And as previously mentioned, onsite restoration of the temporary construction easement as well as offsite restoration to address the temporal loss of CSS (at a 1:1 ratio) would also occur. All temporary impact areas will be restored with native vegetation (coastal sage scrub seed mix; see **Appendix A**) and monitored and managed (weeded) for at least 8 years after construction to reduce the potential for infestation of invasive plant species. Dust control measures will be implemented during the construction phase to reduce excessive dust emissions (Section 4.2 Environmental Commitment #8). A full list of avoidance, minimization, restoration, and offsetting measures is provided in section 4.2 Environmental Commitments. With implementation of the specified environmental commitments, adverse effects would be avoided and minimized to the extent practicable and adverse effects would not diminish the regional population of CAGN. As a result, impacts to CAGN are considered less than significant.

### **Least Bell's Vireo and Critical Habitat**

#### **Critical Habitat:**

A portion of the Proposed Action would occur within LBVI designated critical habitat. However, none of this area provides the PBFs of LBVI critical habitat, which includes riparian woodland vegetation the generally contains both canopy and shrub layers and includes some associated upland habitats. Temporary impacts within designated critical habitat would occur on disturbed upland vegetation from moving and staging heavy equipment. A total of 3.25 acres of designated critical habitat would be

#### Prado Dam Gasline Removal

temporarily impacted by the Proposed Action. No permanent impacts would occur. Commitments presented under Environmental Commitments lists measures to reduce and avoid impacts to designated critical habitat therefore, the proposed action May Affect but is not Likely to Adversely Affect least Bell's vireo designated critical habitat (Section 4.2 Environmental Commitment #8).

**Species:** As discussed under the CAGN analysis above, indirect impacts are expected to be limited to a 500' wide buffer. The movement of LBVI would not be constricted by the proposed activity and they may use a more suitable habitat north/northeast of Prado Dam. While vireo may still be able to successfully forage and nest within the vicinity and possibly within the 500' buffer zone, this analysis assumes an adverse effect to previously and currently established territories within this area.

Dust can also visually impair vireos and degrade air quality and human presence can cause vireos to abandon territories and nests. Increased competition for nest sites and other resources could occur until construction is completed and onsite and offsite habitat restoration occurs. Construction will continue past March 1<sup>st</sup> into LBVI nesting season. However, the majority of the work that would continue through April would be in areas with less suitable habitat for LBVI. The proposed action would result in the potential temporary displacement of 0 LBVI territories within the TCE and potential indirect disturbance of a total 4 LBVI territories in adjacent areas.

All temporary impact areas will be restored with native vegetation (coastal sage scrub seed mix; see Appendix A) and monitored and managed (weeded) for at least 8 years after construction to reduce the potential for infestation on invasive. To minimize potential effects to least Bell's vireo, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of the construction activities. Work will continue into nesting season although, no LBVI territories were found in 2021, 2020 or 2019 near the sections of the gasline that would be removed during nesting season. There was a territory within 110 feet of the gasline removal in 2018. To minimize any potential impact to LBVI that were not detected, portable sound walls will be placed around work equipment when work continues into nesting season (Section 4.2, environmental commitment #4). Noise monitoring will take place during nesting season. Dust control measures will be implemented during the construction phase to reduce excessive dust emissions (Section 4.2, Environmental Commitment #8). Measures to minimize and avoid impacts to this species include monitoring, removing vegetation outside of nesting season, habitat restoration, noise monitoring, sound walls around equipment during nesting season, controlling of excess dust, and continued monitoring during construction for special status species.

With implementation of the specified environmental commitments, adverse effects would be avoided and minimized to the extent practicable and adverse effects would not diminish the regional population of LBVI. As a result, impacts to LBVI are less than significant.

#### **Wildlife**

Any wildlife corridor such as the project area east of the Prado Dam that connects to Chino Hills State

Park, and all of the vegetated ramps (specifically created for wildlife movement), shall not be blocked overnight by equipment (Section 4.2, environmental commitment # 20). During overnight work, lights will be focused on the work to avoid impacts on wildlife movement (Section 4.2, environmental commitment #13). With the added measures, impacts to wildlife movement and wildlife species are expected to be less than significant and no permanent loss of biodiversity is anticipated.

### **Operations and Maintenance**

No additional effects to least Bell's vireo or California Gnatcatcher would occur during routine O&M activities that take place on or from existing established maintenance roads or other permanent features.

## **SECTION - 3.4 Cultural Resources**

### **SECTION - 3.4.1 Affected Environment**

Cultural resources are locations of past human activities on the landscape. The term generally includes any material remains that are at least 50 years old and are of archaeological or historical interest. Examples include archaeological sites such as lithic scatters, villages, procurement areas, resource extractions sites, rock shelters, rock art, shell middens; and historic era sites such as trash scatters, homesteads, railroads, ranches, and any structures that are over 50 years old. Under the National Historic Preservation Act, federal agencies must consider the effects of federal undertakings on cultural resources that are listed or eligible for listing in the National Register of Historic Places (NRHP). Cultural resources that are listed or eligible for listing in the NRHP are referred to as historic properties.

As previously discussed in the introduction, the current undertaking (relocating a utility line in support of raising the spillway) is a feature of the larger SARMP, a comprehensive flood risk management project. In order to comply with Section 106 of the NHPA, the Corps, State Historic Preservation Office (SHPO), and the Advisory County on Historic Preservation (ACHP) executed a programmatic agreement (PA) in 1993 for the entire SARMP of which the current undertaking is just one small piece (**Appendix D**). The PA is still valid and will expire once construction of the SARMP is complete.

Federal preservation laws require that the agency define the area of potential effect (APE) for an undertaking. The APE is the geographic area within which historic properties may be directly or indirectly affected by an undertaking. In this case, the Corps consulted with the California State Historic Preservation Officer (SHPO) regarding the APE for the entire SARMP. The entire APE was surveyed for the presence of historic and prehistoric resources in 1985 by ECOS Management Criteria, Inc. (Lagenwalter and Brock 1985). This survey identified and inventoried NRHP resources along the Santa Ana River from Prado Dam Flood Control Basin all the way to the Pacific Ocean including the gasline relocation corridor. No cultural resources are located within the proposed gasline route, the 3.77 acre staging area, or along the existing gasline that would be removed or grouted in place.

Following the 1985 survey most of the proposed gasline route was used as a borrow area for the Prado Dam embankment raise. Those portions of the proposed gasline corridor that are outside of the previously used borrow area were disturbed during the reconstruction of the outlet channel and main dam embankment raise. Due to the level of previous ground disturbance, the Corps has determined that no further inventory of the gasline relocation corridor is necessary under Stipulation 1 of the PA.

### **SECTION - 3.4.2 Environmental Consequences**

**Significance Criteria.** An impact to Cultural Resources will be considered significant if the alternative (or “undertaking”) would result in:

- A substantial adverse effect to a historic property such that the implementation of the alternative would result in the destruction of a historic property or the loss of a property's listing in or eligibility for listing in the National Register of Historic Places

**Proposed Action:** The proposed action involved the installation of a new gas gasline, the removal or grouting in place of the old gasline, and a 3.77 acre staging area. Installation of the new gasline would involve a combination of trenching and directional boring under the Prado Dam outlet channel. The total width of disturbance would be 75’ at the widest points and the total depth would be 7 feet. HDD will bore 45’ below the Santa Ana River outlet channel for a total depth of 65’ below the ground. The entire gasline corridor has been inventoried for cultural resources and none have been recorded within the proposed corridor or the existing corridor. The proposed route has been heavily disturbed with approximately half of the proposed route falling within the borrow area used for raising the height of the main dam embankment and the remaining areas falling within the construction footprint of the outlet channel or the raised dam embankment. The staging area has been utilized as a staging area for other SARMP features. Impacts to cultural resources would be less than significant.

**No Action Alternative:** No ground disturbing activities would occur and there would be no impacts to cultural resources.

### **SECTION - 3.5 Noise**

#### **SECTION - 3.5.1 Affected Environment**

The project area is bordered by the SR-91 and SR-71 highways. The highways impact the range of sounds across the landscape creating a mosaic of sound ranges from averages around 50 decibels next to the southern embankment, up to averages around 68 decibels in open areas. In areas closer to the freeway there can be spikes in sound readings due to loud speeding vehicles as high as in the 90s decibels range. Some land uses are considered more sensitive to elevated noise levels because of the purpose and intent of the use. Places where people are meant to sleep, or places where a quiet environment is necessary for the function of the land use, are normally considered sensitive. For instance, residential areas, schools, places of worship, and hospitals are more sensitive to noise than

are commercial and industrial land uses. Areas with animal keeping can also be considered as sensitive receptors. Horses can be easily scared by sudden, loud noises.

The closest sensitive receptor is a residential area about a half mile south of the project site, south of SR-91. Since the project area is surrounded by open space to the north and west and industrial land use to the east, there are no other sensitive receptors within half a mile of the project area.

### **SECTION - 3.5.2 Environmental Consequences**

**Significance Criterion.** Noise related impacts would be considered significant if:

- Construction related noise violated any applicable County and City ordinances without obtaining a variance or exemption.

**Proposed Action:** The proposed work is bordered by the SR-91 and SR-71, and is about half a mile away from any residential areas. There are no sensitive receptors. As long as construction activities occur during exempted time periods per the County of Riverside Municipal Code and the City of Norco Municipal Code, 7:00 a.m. to 6:00 p.m., Monday through Friday, the proposed construction would comply with local (city and county) noise ordinances. Limited overnight work is expected to occur, which may require obtaining a variance from local authorities. The project will assume the most restrictive ordinance, of applicable city and county ordinances, to remain within compliance with both county and city policies. Therefore, less than significant impacts would occur from construction equipment noise generated during construction of the Proposed Action.

**No Action Alternative:** Under the No Action Alternative, the existing gasline would not be relocated, and no construction-related noise would be created. However, the purpose and need would not be met.

### **SECTION - 3.6 Hazardous Materials**

#### **SECTION - 3.6.1 Affected Environment**

The Corps prepared a Hazardous, Toxic and Radioactive Waste (HTRW) evaluation for the Prado Spillway Modification Project, which includes the project area for the gasline relocation efforts. The HTRW analysis focused on the known residual and active releases of HTRW into the adjacent property and environment within a 1-mile distance of the study area. The California State Water Resources Control Board's Geotracker environmental database was searched for environmental pollutant information and no known active HTRW sites were identified within the project area.

There is one known stationary source of hazardous waste pollution at the project site not covered by the Geotracker database. The Prado Spillway has a mural known to contain lead-based paints and other heavy metals. However, downstream soil analyses indicate that toxins from the spillway are not being transported downstream (University of California, 1996).

#### **SECTION - 3.6.2 Environmental Consequences**



### **Significance Criteria**

Impacts associated with hazardous materials would be considered significant if the proposed action resulted in:

- A potential public health hazard involving the use, production, or disposal of materials, which pose a hazard to human, animal or plant populations in the project area.

**Proposed Action:** No known hazardous material sites will be impacted due to construction of the proposed action. During construction, trenching has the potential to encounter unknown hazardous materials. Based on previous projects within the area such as the reconstruction of the channelized outlet, the chance of encountering hazardous materials is low. It is highly unlikely that the gasline being removed contain asbestos due to their age, and a remediation plan is in place (Section 4.2, environmental commitment # 19) to deal with asbestos, if found. In addition, a spill prevention plan will be implemented (Section 4.2, environmental commitment #12) in case there is a release of oil, diesel fuel, transmission fluid or other materials for equipment. Due to the lack of hazardous materials in the project area, and with implementation of environmental commitments to prevent against unforeseen hazardous material impacts (reference ECs above), the proposed action will not result in a public health hazard to human, animal or plant populations and impacts would be less than significant.

## **SECTION 4 – ENVIRONMENTAL COMPLIANCE AND COMMITMENTS**

### **SECTION - 4.1 COMPLIANCE**

#### **SECTION 4.1.1 National Environmental Policy Act (NEPA)**

This EA has been prepared in compliance with NEPA. Based on the analyses summarized in this EA, the proposed action will not have a significant impact on the human environment and preparation of an Environmental Impact Statement is not warranted.

#### **SECTION - 4.1.2 Clean Water Act**

The CWA was passed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Specific sections of the CWA control the discharge of pollutants and wastes into aquatic and marine environments. Sections of the CWA that apply to the Proposed Action are Section 401, which requires certification that the proposed discharges affecting waters of the United States comply with the State Water Quality Standards, and Section 404(b)(1), which establishes guidelines for discharge of dredged or fill materials into waters of the United States.

No work would occur within the San Ana River, and indirect impacts would be avoided through the implementation of standard stormwater protection measures; therefore, no 404 or 401 permits would be required for this action. The proposed action is in compliance with the Clean Water Act.

#### **SECTION - 4.1.3 Endangered Species Act.**

#### Prado Dam Gasline Removal

Under ESA Section 7(a)(2), each federal agency must ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of the species' designated critical habitat (16 U.S.C. § 1536(a)(2)). If an agency determines that its actions "may affect" a listed species or its critical habitat, the agency must conduct informal or formal consultation, as appropriate, with either the USFWS or the NMFS, depending on the species at issue (50 C.F.R. §§402.01, 402.14(a)–(b)). If, however, the action agency independently determines that the action would have "no effect" on listed species or critical habitat, the agency has no further obligations under the ESA.

The Corps has determined the Proposed Action may adversely affect the least Bell's vireo, California Gnatcatcher and may affect but is not likely to adversely affect the least Bell's vireo's critical habitat. Formal consultation was initiated June 24, 2021. The Corps will receive a final biological opinion on September 17<sup>th</sup>, 2021. With implementation of the conservation measures contained in the Corps' Biological Opinion (see **Appendix F**), this project would be in compliance with the ESA.

#### **SECTION - 4.1.4 Bald and Golden Eagle Protection Act, as amended**

The proposed action is in compliance. The Bald and Golden Eagle Protection Act of 1940 protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 FR 31132; 50 CFR 22.3).

On 10 November 2009, the USFWS implemented new rules (74 FR 46835) governing the "take" of golden and bald eagles. The new rules were released under the existing Bald and Golden Eagle Act which has been the primary regulation protection unlisted eagle populations since 1940. All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act. The definition of disturb (72 FR 31132) includes interfering with normal breeding, feeding, or sheltering behavior to the degree that it causes or is likely to cause decreased productivity or nest abandonment. A preconstruction survey will be conducted to identify any eagles onsite. A Corps-approved biological monitor will be present for the entirety of the work to ensure compliance with the Bald and Golden Eagle Protection Act.

#### **SECTION - 4.1.5 Clean Air Act**

Under Section 176(c) of the Clean Air Act Amendments (CAA) of 1990, the Lead Agency is required to make a determination of whether the proposed action conforms with the SIP. Conformity is defined in Section 176(c) of the CAAA as compliance with the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. However, if the total direct and indirect emissions from the Proposed Action are below the General Conformity Rule de minimis emission thresholds, the Proposed Action would be exempt from performing a comprehensive air quality conformity analysis, and would be considered to be in compliance with the SIP.

The total direct and indirect emissions from the Proposed Action are below the General Conformity Rule de minimis emission thresholds. The Proposed Action would be exempt from performing a comprehensive air quality conformity analysis and would be considered to be in compliance with the

#### **SECTION - 4.1.6 National Historic Preservation Act.**

In order to comply with Section 106 of the NHPA, the Corps, SHPO, and the ACHP executed a PA in 1993 for the entire SARMP of which the current undertaking is just one small piece (**Appendix D**). The PA is still valid and will expire once construction of the SARMP is complete. The PA details the procedures to be followed for each feature of the project. Under the Proposed Action, no additional consultation is required. Prior to the PA's execution, the entire SARMP APE, including the existing and proposed pipeline corridors and staging area were surveyed for the presence of historic and prehistoric resources (Lagenwalter and Brock, 1985). No cultural resources were located within the proposed gas-line route, the 3.77 acre staging area, or along the existing pipeline that would be removed or grouted in place.

Following the 1985 survey most of the proposed gas-line route was used as a borrow area for the Prado Dam embankment raise. Those portions of the proposed pipeline corridor that are outside of the previously used borrow area were disturbed during the reconstruction of the outlet channel and main dam embankment raise. Due to the level of previous ground disturbance, the Corps has determined that no further inventory of the gas-line relocation corridor is necessary under Stipulation 1 of the PA. The Proposed Action is in compliance with the Act.

#### **SECTION - 4.1.7 Section 10 of the Rivers and Harbors Act.**

Section 10 of the Rivers and Harbors Act approved March 3, 1899, (33 U.S.C. 403), prohibits the unauthorized obstruction or alteration of any navigable water of the United States. The construction of any structure in or over any navigable water of the United States, the excavating from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. All work will be outside of the Santa Ana River and would not have any effects on navigation therefore, the Proposed Action is in compliance with the Rivers and Harbors Act.

#### **SECTION – 4.1.8 Migratory Bird Treaty Act**

The proposed action is in compliance. The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. “Take” is defined as possession or destruction of migratory birds, their nests or eggs. Birds protected under the MBTA include essentially all native birds in a given region. Initial vegetation clearing must be conducted outside of the nesting bird season. Because the Corps also wants to minimize impacts to federally listed species, vegetation removal is planned within a shorter span of time than the migratory nesting season (removal is planned between September 15<sup>th</sup> and February 15<sup>th</sup>).

#### **SECTION – 4.1.9 Executive Order 12898, Environmental Justice in Minority and Low-Income Populations**

E.O. 12898 focuses Federal attention on the environment and human health conditions of minority and low-income communities and calls on agencies to achieve environmental justice as part of its mission. The order requires the USEPA and all other Federal agencies (as well as state agencies receiving Federal funds) to develop strategies to address this issue as part of the NEPA process. The agencies are required to identify and address, as appropriate, any disproportionately high and adverse

human health or environmental impacts of their programs, policies, and activities on minority and low-income populations. The order makes clear that its provisions apply fully to programs involving Native Americans. The CEQ has oversight responsibility for the Federal government's compliance with E.O. 12898 and NEPA. The CEQ, in consultation with the USEPA and other agencies, has developed guidance to assist Federal agencies with their NEPA procedures so that environmental justice concerns are effectively identified and addressed. According to the CEQ's Environmental Justice Guidance Under the National Environmental Policy Act, agencies should consider the composition of the affected area to determine whether minority populations or low-income populations are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse human health or environmental impacts (CEQ 1997).

An analysis of demographic data was conducted to derive information on the approximate locations of low-income and minority populations in the community of concern. Since the analysis considers disproportionate impacts, two areas must be defined to facilitate comparison between the area actually affected and a larger regional area that serves as a basis for comparison and includes the area actually affected. The larger regional area is defined as the smallest political unit that includes the affected area and is called the community of comparison. For purposes of this analysis, the affected area is a half-mile radius around the project areas, and the city of Corona is the community of comparison.

Minority populations: EO 12898 defines a minority as an individual belonging to one of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. A minority population, for the purposes of this environmental justice analysis, is identified when the minority population of the potentially affected area is greater than 50% or the minority population is meaningfully greater than the general population or other appropriate unit of geographic analysis. USEPA's EJScreen tool and the U.S. Census data quick facts was used to obtain the study area demographics. Data is provided in Appendix B. Table 5 provides a summary of the study area demographics.

**Table 5. Minority Population and Low-Income Population Demographics**

Demographics	Affected Area	State	City
Minority Population	n/a%	62%	n/a%
Low-income Population	n/a%	33%	n/a%

Poverty Rates: The EO does not provide criteria to determine if an affected area consists of a low-income population. For purposes of this assessment, the CEQ criterion for defining a low-income population has been adapted to identify whether or not the population in an affected area constitutes a low-income population. An affected geographic area is considered to consist of a low-income population (i.e., below the poverty level, for purposes of this analysis) where the percentage of low-income persons 1) is greater than 50%, or 2) is meaningfully greater than the low-income population percentage in the general population or other appropriate units of geographic analysis. The United States Census Bureau poverty assessment weighs income before taxes and excludes capital gains and non-cash benefits (such as public housing, Medicaid, and food stamps). Table 4 provides a summary of the low-income population for the affected area, city of Corona, and the state of California.

Due to the remote location the affected area does not constitute an EJ community. Therefore, there would be no impacts resulting from the Proposed Action that would result in disproportionately high and adverse impacts to minority and low-income communities. The proposed action is in compliance with Executive Order 12898.

**SECTION - 4.1.10 Executive Order 11988, Floodplain Management**

Under this Executive Order, the Corps must take action to avoid development in the base floodplain (100-year) unless it is the only practicable alternative to reduce hazards and risks associated with floods; to minimize the impact of floods on human safety, health and welfare; and to restore and preserve the natural and beneficial value of the base floodplain. The proposed action would avoid any impacts to the flood basin therefore, the proposed action is in compliance with Executive Order 11988.

#### **SECTION - 4.1.11 Executive Order 13112, Invasive Species**

The proposed action is in compliance with Executive Order 13112, which requires federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health effects that invasive species cause. The environmental protection standard specifications direct the contractor to implement measures to prevent the spread of invasive species. Mitigation measures were added to reduce impacts from invasive species. Furthermore, restoration areas will be monitored and managed (weeded) for 8 years after restoration.

#### **SECTION - 4.2 ENVIRONMENTAL COMMITMENTS**

The Proposed Action includes the following environmental commitments that would be included in contract specifications:

- 1 All vegetation removal must occur between September 15<sup>th</sup> to February 15<sup>th</sup> to avoid impacts to CAGN, LBVI and other nesting birds.
  
2. A biological monitor approved by the Corps' Environmental Resources Branch will monitor construction activities to ensure compliance with all environmental commitments. The biological monitor will survey the proposed Project area and adjacent habitats throughout construction and restoration activities for the presence of special status species and will confirm that conservation measures are sufficient to avoid or minimize impacts to these species, or recommend additional measures as warranted.
  
- 3 Prior to construction activities, the Corps-approved biological monitor shall conduct pre-construction environmental training for all construction crew members. The training shall focus on required avoidance/minimization measures and conditions of regulatory agency permits and approvals. The training shall also include a summary of sensitive species and habitats potentially present within and adjacent to the proposed action area.
  
- 4 Portable sound walls will be required for work occurring between February 15<sup>th</sup> to August 15<sup>th</sup> of any year.
  
- 5 The biological monitor will be required to monitor noise regularly during the nesting season (February 15 – August 15). Ambient noise levels were recorded in January and August 2021 (Appendix A). Noise monitoring will occur to ensure that 1) noise does not exceed 60 A-weighted decibels (dBA) of equivalent continuous sound level (Leq) hourly in areas at or below 60 dBA or another agreed upon limit with the Service, or 2) where pre-construction ambient noise is greater than 60 dBA, noise does not exceed 5 dBA Leq hourly above ambient conditions or another agreed upon limit with the Service, in occupied vireo or gnatcatcher habitat adjacent to the TCE

during the nesting season.

a. If construction noise levels within occupied adjacent habitat cannot be reduced to 60 dBA Leq hourly (in areas at or below 60 dBA), or 5 dBA Leq hourly above ambient (in areas above 60 dBA), or another agreed upon limit with the Service, in adjacent occupied vireo or gnatcatcher habitat during nesting season, the Corps will require SCG to offset impacts at a 1:1 ratio per any period during the breeding season affected by such noise levels. This 1:1 ratio will be based on the acreage of occupied coastal sage scrub or riparian habitat outside the TCE subject to noise levels above 60 dBA Leq hourly (in areas at or below 60 dBA), or 5 dBA Leq hourly above ambient (in areas above 60 dBA), or another agreed upon limit with the Service during the nesting season, per the number of breeding seasons affected. The area affected will be determined by the periodic Project noise monitoring. If necessary, the Corps will identify or require SCG to identify restoration areas for offsetting noise impacts in coordination with the Service and will maintain (continue weeding) those areas for a period of 5 years. Offsetting measures could include the use of mitigation bank credits or direct habitat restoration.

6. In addition to revegetating temporary impact areas, and to address temporal impacts, the Corps will perform or require SCG to perform offsite restoration at a 1 to 1 ratio for all direct impacts to native habitat impacted by the proposed project. This would result in an estimated total of 11.5 acres of habitat restoration, to be verified in stages during construction and by the final construction report. Offsite restoration area(s) and or mitigation bank credits will be identified in coordination with the Service prior to start of construction, or the date by which such offsite restoration area(s) will be identified will be agreed upon by the Service and the Corps/SoCalGas prior to the start of construction. Offsite restoration sites will be actively managed (weeded, planted, irrigated as needed) for a period of 5 years or until success criteria are met in work areas that don't overlap with the potential future Prado Dam Spillway Modification Project (6.2 acres). In work areas that do overlap with the potential future Prado Dam Spillway Modification Project TCE, the Prado Dam Spillway Modification Project will perform the required offsite restoration for direct impacts to that habitat. If the spillway project is not approved for construction within 1 year of the relocation (or if the TCE changes and overlap is reduced), then the Corps will conduct or require 1:1 of offsite restoration for the gas line relocation Project.

a. Restoration activities will be initiated immediately following the completion of the construction, but outside the gnatcatcher and vireo nesting season.

b. Success criteria will include a minimum of 30 percent native plant cover with less than 10 percent invasive plant cover.

c. A quantified monitoring protocol will be established that documents the maintenance and status of native and non-native cover in the restored area, in order to empirically show success of native habitat establishment. This will include documenting both the structure and composition of the restored plant community, and documenting wildlife presence in the restored habitat.

7 A storm water pollution prevention plan (SWPPP) and soil erosion and sediment plan

will be developed prior to construction to minimize erosion and identify measures to eliminate or control pollution sources onsite during and following the construction phase. The SWPPP will determine specific Best Management Practices (BMPs) needed during the project construction phase and after to minimize erosion, identify specific pollution prevention measures that will eliminate or control potential point and non-point pollution sources onsite, and to avoid causing or contributing to any water quality standard exceedances.

- 8** Dust control measures will be implemented during the construction phase to reduce excessive dust emissions. Methods for reducing dust emissions may include wetting work areas by water truck on a regular basis such as dirt access roads and sediment stockpiles, as well as covering truck beds carrying material and stockpiles.
- 9** Upon construction completion, the Corps will require SCG to immediately revegetate each acre that is temporarily impacted and/or made bare by project activities. The hydroseed mix used to restore the disturbed areas will be approved by the Corps and be made of native seed consistent with the native vegetation community. Areas that overlap with the Prado Dam spillway project that will be disturbed may be seeded with an erosion control mix approved by Corps biologists. Non-overlap restoration areas must be monitored and managed (weeded) for at least 8 years after construction to reduce the potential for weed infestation. Depending on the time of year the hydroseed is placed, temporary supplemental watering may be needed. Watering need and frequency for hydroseeded areas will be approved by the Corps to ensure successful germination and establishment of native vegetation. Any areas that overlap with the Prado Dam Spillway project (if or when that project is approved and funded) will transfer over to Corps for long-term monitoring after completion of Spillway construction
- 10** Best management practices shall be implemented to reduce impacts to native habitats, including the following:
  - a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement best management practices to prevent runoff carrying toxic substances from entering the Santa Ana River and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
  - b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Riverside County Fire Department) and when activities may produce sparks. Emergency contacts for the Norco Fire Station No. 57 on Corydon Avenue will be established.
  - c. To the extent feasible, the contractor will prevent exotic weeds from establishing within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.
- 11** Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the TCE including designated staging areas or routes of

travel. The construction area(s) will be the minimal area necessary to complete the proposed action and will be specified in the construction plans. Highly visible barriers (such as orange construction fencing or sound walls) will be installed in sensitive habitats adjacent to the TCE to designate limits of construction activities. These barriers will be maintained until the completion of all construction activities.

- 12:** A spill prevention, control, and countermeasure plan or soil prevention and response plan as applicable, will be developed to prescribe BMPs to prevent hazardous material releases and ensure cleanup of any hazardous material releases.
- 13:** Most work will occur during daylight hours (7am to 5pm) except during HDD pullback (pulling the pipe through the HDD tunnel) and Tie-in (reconnecting the gasline). Lights required for nighttime work will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement.
- 14.** All local noise ordinance must be followed including obtaining any necessary variance from local authorities. Prior to construction, the construction contractor shall obtain Riverside County approval (exemption or variance) per Riverside County Municipal Code Section 847, Section 7.(a).1 – , Section Construction Related Exceptions, for all noise sources not exempt by Riverside County Municipal Code Section 847, Section 2.i. and exceeding Riverside County Municipal Code Section 847, Section 4 – General Sound Level Standards. Additionally, prior to any such activities occurring, the construction contractor shall obtain Riverside County approval (exemption or variance) for all operational and maintenance activities not compliant with Riverside County Municipal Code Section 847.
- 15.** Prior to any ground-disturbing activities (e.g. mechanized clearing or rough grading) for all project related construction activities, a Corps qualified biologist (or environmental monitor) shall conduct a pre-construction surveys of Federally-listed species. During these surveys the biologist will:
  - a. Inspect the project area for any sensitive wildlife species;
  - b. In the event of the discovery of a non-listed, special-status ground-dwelling animal such as a burrowing owl or special-status reptile, attempts will be made to recover and relocate the animal to adjacent suitable habitat within the project site at least 200 feet from the limits of construction activities. Burrowing owl surveys and relocations would follow established protocols.
- 16.** Best management practices shall be implemented to reduce impacts to native habitats, including the following:
  - a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement BMPs to prevent runoff carrying toxic substances from entering the Santa Ana River and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
  - b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Riverside County Fire Department) and when activities may produce sparks.



Emergency contacts for the Norco Fire Station No. 57 on Corydon Avenue will be established.

- c. To the extent feasible, the contractor will prevent exotic weeds from establishing within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.
17. The Corps shall ensure that ground disturbing activities that have the potential to impact historic properties is monitored by archaeologists meeting the Secretary of the Interior's Standards. Any finds shall be documented in accordance with the Programmatic Agreement.
  18. If previously unknown cultural resources are found during construction of any feature of the Santa Ana River Project, construction in the area of the find shall cease until the requirements in 36 CFR 800.13, are met. This would include coordination with the California State Historic Preservation Officer, the Advisory Council on Historic Preservation, and appropriate Native American groups and/or other interested parties. It may require additional measures such as test and data recovery excavations, archival research, avoidance measures, etc.
  19. If any segment of the gasline tests positive for asbestos, the soil will be back-filled and a remediation plan will be prepared.
  20. Any wildlife corridor (i.e. project area east of the Prado Dam that connects to Chino Hills State Park, and all of the vegetated ramps) shall not be blocked overnight by equipment.
  21. The project construction contractor shall restrict the idling of construction equipment to 10 minutes.
  22. Best management practices shall be implemented to reduce impacts to native habitats, including the following:
    - a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement BMPs to prevent runoff carrying toxic substances from entering the Santa Ana River and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
    - b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Riverside County Fire Department) and when activities may produce sparks. Emergency contacts for the Norco Fire Station No. 57 on Corydon Avenue will be established.
    - c. To the extent feasible, the contractor will prevent exotic weeds from establishing within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.

23. Open trench segments will have the gasline quickly placed and buried. If the gasline is unable to be backfilled quickly, then protection measures will be put in place to protect wildlife and workers (e.g. barriers such as plates, netting, boards, and ramps every 50 feet in open trenches to help wildlife exit).

## **SECTION - 5 REFERENCES**

Calflora: Information on California plants for education, research and conservation. Berkeley, California: The Calflora Database [a non-profit organization]. Available: <https://www.calflora.org/> (Accessed: April 2021).

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USFWS. 1994. Designation of Critical Habitat for Least Bell's Vireo. Federal Register 50 CFR 17. 02 February, 1994.

## **SECTION - 6 ACRONYMS**

ACHP..... Advisory Council on Historic Preservation  
APE..... Area of Potential Effects  
CAA..... Clean Air Act  
CEQ..... Council on Environmental Quality  
CO..... Carbon monoxide

CWA.....	Clean Water Act
EA .....	Environmental Assessment
EFH.....	Essential Fish Habitat
ESA.....	Endangered Species Act
FONSI .....	Finding of No Significant Impact
NEPA .....	National Environmental Policy Act
NHPA.....	National Historic Preservation Act
NO2.....	Nitrogen dioxide
SHPO.....	State Historic Preservation Officer
USFWS .....	U.S. Fish and Wildlife Service

## **SECTION - 7 PREPARERS/REVIEWERS**

### **Preparers**

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Corps, Archeologist, Ecosystems Planning Section

### **Reviewers**

Hayley Lovan

Corps, Acting Environmental Resources Branch Chief

## **SECTION - 8 DISTRIBUTION LIST**

### **Federal Agencies**

U.S. Environmental Protection Agency  
Environmental Review Branch  
Region 9

U.S. Fish & Wildlife Service Palm Springs Office

U.S. Geological Survey, Palm Springs Office

### **State Agencies**

CA. Dept. of Conservation District 1,  
Division of Oil, Gas, and Geothermal Resources

California Department of Fish and Wildlife

State Historic Preservation Officer  
Office of Historic Preservation

Regional Water Quality Control Board Region 8

Native American Heritage Commission

State Water Resources Control Board

Department of Parks and Recreation

Caltrans District 12 and 8

Caltrans Office of Encroachment Permits 464

CA Dept. of Toxic Substances Control

CA Dept. of Public Health

### **Local Agencies**

Orange County Water District

Inland Empire Utilities Agency  
Riverside Co. Flood Control

Orange County Public Works Flood Control Div./  
Santa Ana River Section

OC Public Works/OC Development Services

South Coast Air Quality Management District

General Manager Metropolitan Water District

Orange County Transportation Authority

Riverside County, County Recorder

Riverside County Planning Department

Riverside County Regional Parks and Open Space

Orange County Clerk – Recorder

Western Riverside County Regional Conservation Authority

Eastvale City Hall

City of Norco

**Organizations/Groups**

Santa Ana Watershed Association

Riverside-Corona Resource Conservation District

Riverside Audubon Society

Audubon Society

San Bernardino Valley Chapter

Prado Basin Group Sierra Club San Geronio Chapter

Glenn Parker Wildlife Corridor Conservation Authority

Associate Director Inland Empire Waterkeeper

Endangered Habitats League

**Private Entity**

Public Projects BNSF Railway

BNSF Railway

**Libraries**

Corona Public Library

Riverside Public Library

Chino Branch Library

**Native American Contacts**

Gabrieleno Band of Mission Indians - Kizh Nation

Gabrieleno/Tongva San Gabriel Band of Mission Indians

Gabrielino /Tongva Nation

Gabrielino Tongva Indians of California Tribal Council

Juaneno Band of Mission Indians

Pauma Band of Luiseno Indians - Pauma & Yuima Reservation

Pechanga Band of Mission Indians

Rincon Band of Mission Indians

Soboba Band of Luiseno Indians

## APPENDIX A- Air Quality Analysis

### **Emission Estimates Methodology**

Emissions were estimated using CalEEMod.2020.4.0 emission modeling software, the California Air Resources Board-approved emissions modeling software used by all air districts in California.

### **Data Preparation & Data Entry (Off-Road Equipment)**

Using data from cost estimating worksheets, various pieces of off-road equipment were grouped into classes of off-road equipment recognized in CalEEMod. Total hours for each class of equipment were adjusted for the approximately 122-day construction period. See enclosed Off-road Equipment Data Sheet.

### **Data Entry (On-Road Equipment)**

All on-road emission estimates assume the following for each construction year:

- 6 heavy duty trucks (HHDT) traveling 20 miles per day.
- 10 worker vehicles (LDA) traveling 14.7 miles per day, the CalEEMod default value.

### **Data Presentation**

Emissions Summary from Section 2.0 of CalEEMod's annual emissions report were reported as estimated annual emission (enclosed).

General Conformity requires estimation of ozone. Ozone (O<sub>3</sub>) formation is driven by two major classes of directly emitted precursors: nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC). The relation between O<sub>3</sub>, NO<sub>x</sub> and VOC is driven by complex nonlinear photochemistry. Due to the variability in rates of O<sub>3</sub> formation, CalEEMod.2020.4.0 does not provide estimates for the compound. Instead, the emission estimates for VOC and NO<sub>x</sub> are used as a surrogate for reporting O<sub>3</sub> emissions per the General Conformity Applicability Rates. Since the consumption of VOC or NO<sub>x</sub> in O<sub>3</sub> formation reaction is variable, actual O<sub>3</sub> levels are lower than those reported

General Conformity Rule makes a distinction between NO<sub>x</sub> as an ozone precursor and NO<sub>2</sub> for reporting purposes. CalEEMod.2020.4.0 has emission factors for NO<sub>x</sub> but not for NO<sub>2</sub>. Because NO<sub>2</sub>, a form of NO<sub>x</sub>, forms the majority of NO<sub>x</sub> emission from internal combustion engines, estimated emissions of NO<sub>x</sub> are used as a surrogate for NO<sub>2</sub> emissions.

## Off-road Equipment Data

Equipment	CalEEMod Equivalent Classes	Number	Horsepower	Hours per Day	Total Days on Site	hours per day adjusted for 122 total work days
Air Compressor- 175 CFM	AIR COMPRESSOR	1	75	4	40	1.311475
DDR 420 Drill Rig (for HDD)	BORE/DRILL RIG	1	180-186	10	42	3.442623
R.T. 30 Ton Crane (for HDD)	CRANES	3	152	4	14	0.459016
Excavator- CAT 330 Size	EXCAVATOR	1	270	4	40	1.311475
Power Generator	GENERATOR SETS	2	125	8	80	5.245902
OMEGA D-750 Triplex Pump (for HDD)	GENERATOR SETS	1	750	10	42	3.442623
Power Generator 275 kW (for HDD)	GENERATOR SETS	1	419-449	10	42	3.442623
Motor Grader- CAT 12 Size	GRADER	1	135-175	8	15	0.983607
Low-bed with Trailer	NOT COUNTED	2	325-425	4	7	0.229508
Pickup 1/2 ton (4WD)	NOT COUNTED	8	300-360	4	80	2.622951
HDD	NOT COUNTED					0
End Dump Truck (for HDD)	NOT COUNTED	2	295-335	4	7	0.229508
120 BBL Vacuum Truck (for HDD)	NOT COUNTED	2	250	5	21	0.860656
Low-bed with Trailer (Delivery for HDD)	NOT COUNTED	2	325-425	4	7	0.229508
Pickup 1/2 ton (4WD)	NOT COUNTED	4	300-360	3	42	1.032787
Pump- Fill and Test	NOT COUNTED	1	100	6	5	0.245902
3 AX Water Truck 6x6	OFF-HIGHWAY TRUCKS	1	300-360	2	80	1.311475
TRI MCS 1000 Mud System (for HDD)	OTHER MATERIAL HANDLING EQ	1	540	10	42	3.442623
Forklift - 10,000# & Over	ROUGH TERRAIN FORKLIFE	1	90	4	40	1.311475
Crawler Dozer w/Winch D-7	TRACTOR CRAWLER	2	235-240	8	15	0.983607
Pipelayer- 572 Size	TRACTOR CRAWLER	1	230	4	40	1.311475
Bending Machine 22-36"	TRACTOR CRAWLER	1	173	2	40	0.655738
Backfill/Padding Machine Outlaw	TRACTOR CRAWLER	2	300-400	4	20	0.655738
Pipelayer- 572 Size	TRACTOR CRAWLER	2	230	4	21	0.688525
Backhoe- 420/430/C580	TRACTOR/LOADER/BACKHOES	1	85-95	4	40	1.311475
Backhoe CAT 420 (for HDD)	TRACTOR/LOADER/BACKHOES	2	85-93	5	7	0.286885
Welding Truck (for HDD)	WELDER	1	50	4	21	0.688525
Welder	WELDER	1	50	4	45	1.47541



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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**PRADO GAS LINE RELOCATION**  
South Coast Air Basin, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	1.00		5.00	0.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2023

Utility Company

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - Z

Off-road Equipment - Z

Trips and VMT - TOTAL TRIPS = TRIPS USED TO HAUL EQUIPMENT TO AND FROM SITE

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	122.00
tblConstructionPhase	PhaseEndDate	11/16/2022	5/3/2022
tblConstructionPhase	PhaseStartDate	12/30/2021	11/15/2021
tblOffRoadEquipment	HorsePower	158.00	84.00
tblOffRoadEquipment	HorsePower	168.00	172.00

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tblOffRoadEquipment	HorsePower	78.00	46.00
tblOffRoadEquipment	HorsePower	97.00	231.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.74
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.46	0.45
tblOffRoadEquipment	LoadFactor	0.37	0.29
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType	Welders	Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	0.45
tblOffRoadEquipment	UsageHours	8.00	5.20
tblOffRoadEquipment	UsageHours	8.00	3.40
tblOffRoadEquipment	UsageHours	8.00	0.68
tblOffRoadEquipment	UsageHours	7.00	1.30
tblOffRoadEquipment	UsageHours	7.00	0.28
tblOffRoadEquipment	UsageHours	8.00	0.68
tblOffRoadEquipment	UsageHours	8.00	1.40
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

2.0 Emissions Summary

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PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0325	0.3214	0.2610	5.9000e-004	1.9300e-003	0.0140	0.0159	5.1000e-004	0.0134	0.0139	0.0000	51.0284	51.0284	0.0109	5.0000e-005	51.3165
2022	0.0731	0.6983	0.6377	1.4600e-003	4.8100e-003	0.0301	0.0349	1.2800e-003	0.0287	0.0300	0.0000	126.6948	126.6948	0.0268	1.2000e-004	127.4027
Maximum	0.0731	0.6983	0.6377	1.4600e-003	4.8100e-003	0.0301	0.0349	1.2800e-003	0.0287	0.0300	0.0000	126.6948	126.6948	0.0268	1.2000e-004	127.4027

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0325	0.3214	0.2610	5.9000e-004	1.9300e-003	0.0140	0.0159	5.1000e-004	0.0134	0.0139	0.0000	51.0283	51.0283	0.0109	5.0000e-005	51.3164
2022	0.0731	0.6983	0.6377	1.4600e-003	4.8100e-003	0.0301	0.0349	1.2800e-003	0.0287	0.0300	0.0000	126.6946	126.6946	0.0268	1.2000e-004	127.4025
Maximum	0.0731	0.6983	0.6377	1.4600e-003	4.8100e-003	0.0301	0.0349	1.2800e-003	0.0287	0.0300	0.0000	126.6946	126.6946	0.0268	1.2000e-004	127.4025

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-16-2021	2-14-2022	0.6245	0.6245
2	2-16-2022	6-14-2022	0.4940	0.4940
		Highest	0.6245	0.6245

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/15/2021	5/3/2022	5	122	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Bore/Drill Rigs	1	3.40	221	0.50
Building Construction	Cranes	3	0.45	231	0.29
Building Construction	Excavators	1	1.30	84	0.74
Building Construction	Generator Sets	2	5.20	84	0.74
Building Construction	Generator Sets	1	3.40	84	0.74
Building Construction	Generator Sets	1	0.68	84	0.74
Building Construction	Graders	1	0.98	187	0.41
Building Construction	Off-Highway Trucks	1	1.30	402	0.38
Building Construction	Other Material Handling Equipment	1	3.40	172	0.42
Building Construction	Rough Terrain Forklifts	1	1.30	100	0.40
Building Construction	Crawler Tractors	2	0.98	212	0.43
Building Construction	Crawler Tractors	1	1.30	212	0.43
Building Construction	Crawler Tractors	1	0.65	212	0.43
Building Construction	Crawler Tractors	2	0.65	212	0.43
Building Construction	Crawler Tractors	2	0.68	212	0.43
Building Construction	Air Compressors	1	1.30	46	0.45

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Tractors/Loaders/Backhoes	1	1.30	231	0.29
Building Construction	Tractors/Loaders/Backhoes	2	0.28	97	0.37
Building Construction	Welders	1	0.68	46	0.45
Building Construction	Welders	1	1.40	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	27	10.00	0.00	6.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0318	0.3207	0.2642	5.7000e-004		0.0140	0.0140		0.0133	0.0133	0.0000	49.3724	49.3724	0.0108	0.0000	49.6431
Total	0.0318	0.3207	0.2642	5.7000e-004		0.0140	0.0140		0.0133	0.0133	0.0000	49.3724	49.3724	0.0108	0.0000	49.6431

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.7000e-004	4.0000e-005	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0539	0.0539	0.0000	1.0000e-005	0.0565
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	5.4000e-004	6.7600e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6021	1.6021	5.0000e-005	5.0000e-005	1.6169
<b>Total</b>	<b>8.4000e-004</b>	<b>7.1000e-004</b>	<b>8.8000e-003</b>	<b>2.0000e-005</b>	<b>1.9300e-003</b>	<b>1.0000e-005</b>	<b>1.9600e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>1.6660</b>	<b>1.6660</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>1.6734</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0318	0.3207	0.2542	5.7000e-004		0.0140	0.0140		0.0133	0.0133	0.0000	49.3723	49.3723	0.0108	0.0000	49.6430
<b>Total</b>	<b>0.0318</b>	<b>0.3207</b>	<b>0.2542</b>	<b>5.7000e-004</b>		<b>0.0140</b>	<b>0.0140</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>49.3723</b>	<b>49.3723</b>	<b>0.0108</b>	<b>0.0000</b>	<b>49.6430</b>



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3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.7000e-004	4.0000e-005	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0539	0.0539	0.0000	1.0000e-005	0.0565
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	5.4000e-004	5.7600e-003	2.0000e-005	1.9200e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6021	1.6021	5.0000e-005	5.0000e-005	1.6169
<b>Total</b>	<b>8.4000e-004</b>	<b>7.1000e-004</b>	<b>8.8000e-003</b>	<b>2.0000e-005</b>	<b>1.9300e-003</b>	<b>1.0000e-005</b>	<b>1.9500e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.3000e-004</b>	<b>0.0000</b>	<b>1.6560</b>	<b>1.6560</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>1.6734</b>

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0716	0.6968	0.6222	1.4200e-003		0.0300	0.0300		0.0287	0.0287	0.0000	122.7058	122.7058	0.0267	0.0000	123.3737
<b>Total</b>	<b>0.0716</b>	<b>0.6968</b>	<b>0.6222</b>	<b>1.4200e-003</b>		<b>0.0300</b>	<b>0.0300</b>		<b>0.0287</b>	<b>0.0287</b>	<b>0.0000</b>	<b>122.7058</b>	<b>122.7058</b>	<b>0.0267</b>	<b>0.0000</b>	<b>123.3737</b>

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3.2 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.6000e-004	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1304	0.1304	1.0000e-005	2.0000e-005	0.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	1.1800e-003	0.0154	4.0000e-005	4.7700e-003	3.0000e-005	4.8000e-003	1.2700e-003	3.0000e-005	1.2900e-003	0.0000	3.8586	3.8586	1.1000e-004	1.0000e-004	3.8923
<b>Total</b>	<b>1.4700e-003</b>	<b>1.5400e-003</b>	<b>0.0156</b>	<b>4.0000e-006</b>	<b>4.8100e-003</b>	<b>3.0000e-006</b>	<b>4.8400e-003</b>	<b>1.2800e-003</b>	<b>3.0000e-006</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>3.8890</b>	<b>3.8890</b>	<b>1.2000e-004</b>	<b>1.2000e-004</b>	<b>4.0280</b>

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0716	0.6968	0.6222	1.4200e-003		0.0300	0.0300		0.0287	0.0287	0.0000	122.7057	122.7057	0.0267	0.0000	123.3735
<b>Total</b>	<b>0.0716</b>	<b>0.6968</b>	<b>0.6222</b>	<b>1.4200e-003</b>		<b>0.0300</b>	<b>0.0300</b>		<b>0.0287</b>	<b>0.0287</b>	<b>0.0000</b>	<b>122.7057</b>	<b>122.7057</b>	<b>0.0267</b>	<b>0.0000</b>	<b>123.3735</b>

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3.2 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.6000e-004	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1304	0.1304	1.0000e-005	2.0000e-005	0.1367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4600e-003	1.1800e-003	0.0154	4.0000e-005	4.7700e-003	3.0000e-005	4.8000e-003	1.2700e-003	3.0000e-005	1.2900e-003	0.0000	3.8586	3.8586	1.1000e-004	1.0000e-004	3.8923
<b>Total</b>	<b>1.4700e-003</b>	<b>1.5400e-003</b>	<b>0.0156</b>	<b>4.0000e-006</b>	<b>4.8100e-003</b>	<b>3.0000e-006</b>	<b>4.8400e-003</b>	<b>1.2800e-003</b>	<b>3.0000e-006</b>	<b>1.3000e-003</b>	<b>0.0000</b>	<b>3.8880</b>	<b>3.8880</b>	<b>1.2000e-004</b>	<b>1.2000e-004</b>	<b>4.0290</b>

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.006584	0.000815	0.000515	0.024285	0.000743	0.003774

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	

7.0 Water Detail

7.1 Mitigation Measures Water

PRADO GAS LINE RELOCATION - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

## Appendix B- Environmental Protection Agency: Environmental Justice Screener



### EJSCREEN Report (Version 2020)

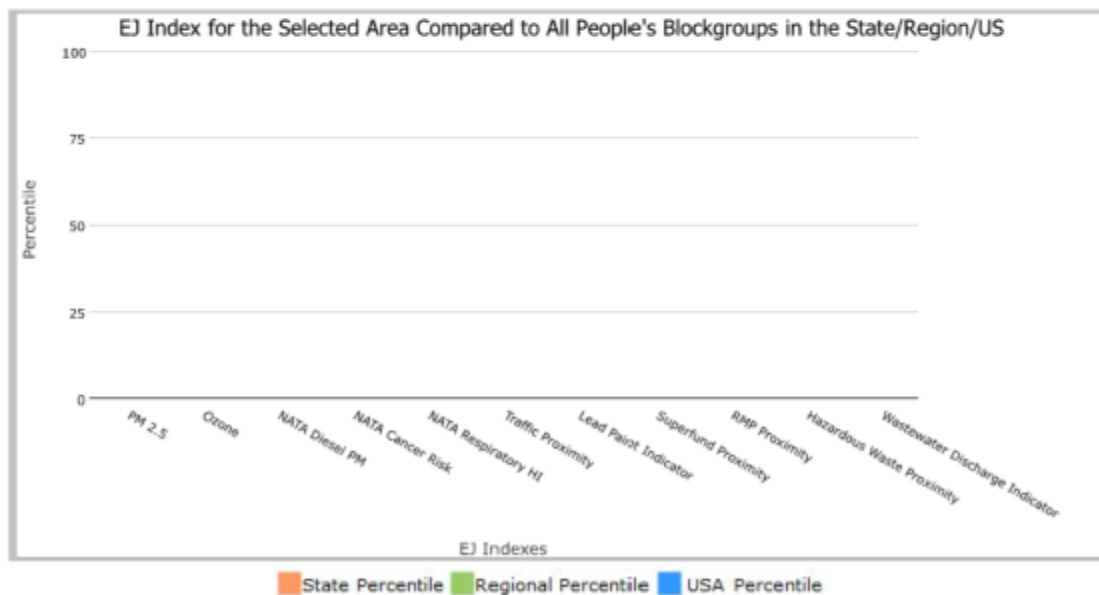


the User Specified Area, CALIFORNIA, EPA Region 9

Approximate Population: 0

Input Area (sq. miles): 0.23

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
<b>EJ Indexes</b>			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA <sup>*</sup> Diesel PM	N/A	N/A	N/A
EJ Index for NATA <sup>*</sup> Air Toxics Cancer Risk	N/A	N/A	N/A
EJ Index for NATA <sup>*</sup> Respiratory Hazard Index	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	N/A	N/A	N/A
EJ Index for Lead Paint Indicator	N/A	N/A	N/A
EJ Index for Superfund Proximity	N/A	N/A	N/A
EJ Index for RMP Proximity	N/A	N/A	N/A
EJ Index for Hazardous Waste Proximity	N/A	N/A	N/A
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

**EJSCREEN Report (Version 2020)**  
 the User Specified Area, CALIFORNIA, EPA Region 9



Approximate Population: 0  
 Input Area (sq. miles): 0.23



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0



**EJSCREEN Report (Version 2020)**  
 the User Specified Area, CALIFORNIA, EPA Region 9  
**Approximate Population: 0**  
**Input Area (sq. miles): 0.23**



Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
<b>Environmental Indicators</b>							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$ )	N/A	10.6	N/A	9.99	N/A	8.55	N/A
Ozone (ppb)	N/A	49.2	N/A	50.1	N/A	42.9	N/A
NATA* Diesel PM ( $\mu\text{g}/\text{m}^3$ )	N/A	0.467	N/A	0.479	N/A	0.478	N/A
NATA* Cancer Risk (lifetime risk per million)	N/A	36	N/A	35	N/A	32	N/A
NATA* Respiratory Hazard Index	N/A	0.55	N/A	0.53	N/A	0.44	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	N/A	2000	N/A	1700	N/A	750	N/A
Lead Paint Indicator (% Pre-1960 Housing)	N/A	0.29	N/A	0.24	N/A	0.28	N/A
Superfund Proximity (site count/km distance)	N/A	0.17	N/A	0.15	N/A	0.13	N/A
RMP Proximity (facility count/km distance)	N/A	1.1	N/A	0.99	N/A	0.74	N/A
Hazardous Waste Proximity (facility count/km distance)	N/A	6.2	N/A	5.3	N/A	5	N/A
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	18	N/A	18	N/A	9.4	N/A
<b>Demographic Indicators</b>							
<b>Demographic Index</b>	N/A	47%	N/A	46%	N/A	36%	N/A
People of Color Population	N/A	62%	N/A	60%	N/A	39%	N/A
Low Income Population	N/A	33%	N/A	33%	N/A	33%	N/A
Linguistically Isolated Population	N/A	9%	N/A	8%	N/A	4%	N/A
Population With Less Than High School Education	N/A	17%	N/A	16%	N/A	13%	N/A
Population Under 5 years of age	N/A	6%	N/A	6%	N/A	6%	N/A
Population over 64 years of age	N/A	14%	N/A	14%	N/A	15%	N/A

\* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

For additional information, see: [www.epa.gov/environmentaljustice](http://www.epa.gov/environmentaljustice)

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.



### Appendix C: Seed Mix

This coastal sage scrub seed mix was prepared by a biologist based on existing coastal sage scrub composition and was used to seed the wildlife ramp that goes over the auxiliary dike of Prado Dam. This is a potential list but substitutions may be made based on review and recommendations by Corps biologists and consultants.

Common Name	Botanical Name	Pounds per Acre	Plant Type
California sagebrush	<i>Artemisia californicus</i>	2	Perennial
Black sage	<i>Salvia mellifera</i>	3	Perennial
White sage	<i>Salvia apiana</i>	2	Perennial
Coyote brush	<i>Baccharis pilularis</i>	2	Perennial
California bush sunflower	<i>Encelia californica</i>	4	Perennial
California buckwheat	<i>Eriogonum fasciculatum</i>	8	Perennial
Coast goldenbush	<i>Isocoma menziesii</i>	3	Perennial
Deerweed	<i>Lotus scoparius</i>	5	Bi-annual
Arroyo lupine	<i>Lupinus succulentus</i>	1	Annual
California poppy	<i>Eschscholtzia californica</i>	1	Perennial herb/Annual
Plantain	<i>Plantago ovata</i>	5	Annual
Purple needle grass	<i>Nassella pulchra</i>	1.5	Perennial grass
Foothill needle grass	<i>Nassella lepida</i>	1.5	Perennial grass
Nodding needle grass	<i>Nassella cernua</i>	1.5	Perennial grass
Total pounds per acre		40.5	

**Appendix D: Programmatic Agreement (PA)**

Enclosure One

PROGRAMMATIC AGREEMENT  
AMONG  
THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS,  
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,  
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING IMPLEMENTATION OF THE SANTA ANA RIVER FLOOD CONTROL  
PROJECT

**Advisory  
Council On  
Historic  
Preservation**

---

The Old Post Office Building  
1100 Pennsylvania Avenue, NW, #809  
Washington, DC 20004

Reply to: 730 Simms Street, #401  
Golden, Colorado 80401

---

April 23, 1993

Robert S. Joe  
Chief, Planning Division  
Department of the Army  
Los Angeles District  
Corps of Engineers  
P.O. Box 2711  
Los Angeles, CA 90053-2325


REF: Programmatic Agreement regarding the Santa Ana River Flood  
Control Project, California.

Dear Mr. Joe:

The enclosed Programmatic Agreement regarding the Santa Ana River Flood Control Project has been executed by the Council. This action constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. Please send copies of the signed Agreement to the California State Historic Preservation Officer and your Federal Preservation Officer.

The Council appreciates your cooperation in reaching a satisfactory resolution of this matter.

Sincerely,

  
Claudia Nissley  
Director, Western Office  
of Review

Enclosure

PROGRAMMATIC AGREEMENT  
AMONG  
THE LOS ANGELES DISTRICT, CORPS OF ENGINEERS,  
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,  
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING IMPLEMENTATION OF THE SANTA ANA RIVER FLOOD CONTROL PROJECT

WHEREAS, the Los Angeles District, Corps of Engineers (COE) proposes to administer the Santa Ana River Flood Control Project, authorized by the Water Resources Development Act of 1986 (Public Law 99-662); and

WHEREAS, the Santa Ana River Project (the Project) will involve flood control improvements as described in *Supplemental Environmental Impact Statement, Santa Ana River Mainstem Including Santiago Creek, Phase II General Design Memorandum* (1988); and

WHEREAS, the COE, has determined that the Project may have an effect on properties included in or eligible for inclusion in the National Register of Historic Places and has consulted with the Advisory Council on Historic Preservation (Council) and the California State Historic Preservation Officer (SHPO) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f) and Section 110(f) of the same Act (16 U.S.C. 470h-2(f)); and

WHEREAS, the Flood Control Districts of the Counties of Orange, Riverside, and San Bernardino, and the local Native American community participated in the consultation and have been invited to concur in this Programmatic Agreement; and

WHEREAS, the definitions given in 36 CFR 800.2 are applicable throughout this agreement;

NOW, THEREFORE, the COE, the Council, and the SHPO agree that the project shall be administered in accordance with the following provisions in order to satisfy the COE's responsibility under Section 106 for all individual aspects of the project.

STIPULATIONS

The COE will ensure that the following measures are carried out:

1. Archeological Survey.

Almost all of the project's area of potential effects has been surveyed. If there are additional lands that need to be surveyed for reasons such as, for example, project redesign or previously denied access, then the COE shall ensure that an archaeological survey of these lands is conducted. The survey shall be conducted in a manner consistent with the *Secretary of the Interior's Standards and Guidelines for Identification* (48 FR 44720-23) and taking into account NPS publication, *The Archeological Survey: Methods and Uses* (1978:GPO stock #024-016-00091). The survey shall be conducted in consultation with the SHPO, and a report of the survey, meeting the standards of the SHPO, shall be submitted to the SHPO for review and approval.

## 2. Recording.

Archeological site record forms shall be completed for all locations where cultural materials are identified. The site record forms will be completed in accordance with the California *Archeological Inventory Handbook for Completing An Archeological Site Record* (DPR 422-A-1, Rev. 5/86).

## 3. Evaluation.

Regional context summaries have been developed Goldberg and Arnold (1988), and Greenwood and Foster (1990) for local prehistoric districts, historic archeological districts, and a number of individual historic archeological properties and historic structures. The COE shall use the Goldberg and Arnold, and Greenwood and Foster summaries to develop an evaluation plan to evaluate properties identified within the Project's Area of Potential Effects (APE) for eligibility for inclusion in the National Register of Historic Places (NRHP). This evaluation plan shall detail site- or area-specific studies for the archival, architectural or subsurface testing which may be necessary to resolve questions of eligibility and to identify the values that qualify a property as eligible. The COE shall submit the evaluation plan to the SHPO for review and comment. Unless the SHPO objects within thirty days after receipt of the plan, the COE shall ensure that it is implemented.

Once an evaluation plan is accepted by the SHPO, the COE shall, in consultation with the SHPO, apply the National Register Criteria (36 CFR 60.4) to determine whether the properties are eligible. Should the COE and the SHPO determine that any of the properties are eligible for listing in the NRHP, the properties shall be considered eligible for purposes of this agreement. Should the COE and SHPO disagree that some or any of the properties are eligible, the COE shall submit documentation to the Keeper of the National Register for a formal determination of eligibility. Should COE and SHPO agree that a property is not eligible, such concurrence shall be, for the purposes of this Agreement, deemed conclusive that the property is not eligible and need not be the subject of further consideration.

## 4. Treatment Plan.

The COE shall assess the effects of the project on all National Register eligible properties in accordance with 36 CFR 800.5. A Treatment Plan (TP) shall be developed to take into account the effects of the project on historic properties that are determined to be eligible for listing in the NRHP.

The TP shall be consistent with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 44734-37) and take into account the Council's publication, *Treatment of Archeological Properties - A Handbook* (Advisory Council on Historic Preservation, draft 1980), subject to any pertinent revisions the Council may take in the publication prior to completion of the TP. It shall also take into account the Secretary of Interior's *Guidelines for Historical and Architectural Engineering Documentation* (48 FR 44729-34).

The TP shall include, but not be limited to:

- A. Measures to be taken to ensure avoidance and protection of historic properties, including floodproofing where feasible;

- B. Data recovery plans founded on research designs to guide data recovery at historic properties significant for their information potential and which cannot be avoided by the effects of the project, or otherwise preserved in place. The research designs shall be developed in accordance with the standards and guidelines attached as Appendix 1.
- C. A plan for historical documentation for historic archeological properties;
- D. A plan for the relocation and interpretation of suitable historic structures that cannot be preserved in place;
- F. A curation agreement that ensures that all materials and data from archeological sites are curated in accordance with 36 CFR 79. Materials recovered from privately owned lands that are to be returned to their owners will be maintained in accordance with 36 CFR 79 until their analysis is complete;
- G. A plan for the treatment and disposition of items of cultural patrimony and human remains developed in consultation with the SHPO and representatives of relevant local Native American groups;
- H. A plan for the treatment of historic properties that may be discovered during the implementation of the undertaking;
- I. A schedule for the submission and review by the SHPO of progress reports, and the methods by which the consulting parties, and interested persons, including relevant Native American groups will be kept informed of the work and afforded the opportunity to participate;

5. Review of Treatment Plan.

The COE shall submit the TP to the SHPO, Council, and concurring parties to this Agreement for review and comment. The reviewers shall have thirty (30) days from receipt of the Treatment Plan to respond to the COE with comments. Failure to respond by any consulting party within the 30-day comment period shall not prohibit the COE from implementing the Treatment Plan.

6. Historic Properties Management Plan.

Within one year of the implementation of the TP, the COE will develop a Historic Properties Management Plan (HPMP) for Prado Basin in accordance with the standards and guidelines attached as appendix 2. The COE will provide copies of the draft HPMP to the SHPO and the Council for review and acceptance. Upon acceptance of the HPMP by the SHPO and the Council, the COE will finalize and implement it in lieu of compliance with 36 CFR 800.4 through 800.6 and 36 CFR 800.11. The COE will prepare an annual report on its implementation, and provide the report to the SHPO and Council for review, comment and consultation as needed.

7. Archeological Report Dissemination.

The COE shall ensure that all final archeological and historic reports resulting from actions

pursuant to this agreement will be provided to the SHPO and to the National Park Service for possible peer review and submission to the National Technical Information Service (NTIS). The agency official shall ensure that all reports are responsive to contemporary professional standards and to the Department of Interior's *Format Standards for Final Reports of Data Recovery Programs* (42 FR 5377-79). Precise locational data may be provided only in a separate appendix, if it appears that their release could jeopardize archeological sites.

8. Provision of Information to Data Base.

The COE will ensure that information resulting from the archeological data recovery project provided for in Stipulation 4.A is provided to the Orange, San Bernardino, and Riverside Counties Information Centers of the California Archeological Inventory.

9. Disputes.

Should the Council, SHPO, or consulting parties object within 30 days to any plans provided for review pursuant to the Programmatic Agreement, the COE shall consult with the objecting party to resolve the objection. If the COE determines that the objection cannot be resolved, the COE shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all documentation, the Council will either:

- A. provide the COE with recommendations, which the COE will take into account in reaching a final decision regarding the dispute; or
- B. notify the COE that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any comment provided in response to such a request will be taken into account by the COE in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

10. Amendment of this Agreement.

Any party to this agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR 800.13 to consider such amendment.

11. Termination of this agreement.

Any party to this agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the other interested parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the COE will comply with 36 CFR 800.4 through 36 CFR 800.6 with regard to individual activities covered by this agreement.

12. Expiration of Agreement.

This agreement shall expire upon completion of the project. COE shall provide the parties to this agreement within thirty (30) days notice of a final project date.

Execution and implementation of this agreement evidences that the COE has satisfied its Section 106 responsibilities and taken into account the effects of the undertaking on historic properties.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

BY: Robert O. Bush Date 4/16/93

U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT

BY: R. L. VanAntwerp Date 8/17/92  
R. L. VanAntwerp,  
Colonel, Corps of Engineers  
District Engineer

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY: Stade N. Craig Date August 19, 1992



Concur:

ORANGE COUNTY FLOOD CONTROL DISTRICT

BY: William L. Gunn Date: 2-3-93

APPROVED AS TO FORM  
TERRY C. ANDRUS, County Council  
ORANGE COUNTY, CALIFORNIA

By Denise P. Jones  
Deputy

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

SAN BERNARDINO FLOOD CONTROL DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

Concur:

ORANGE COUNTY FLOOD CONTROL DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BY: Kenneth J. Edwards Date: 3-16-93

FORM APPROVED,  
COUNTY COUNSEL

FEB 23 1993

BY K. Watts-Bayan

SAN BERNARDINO FLOOD CONTROL DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

Concur:

ORANGE COUNTY FLOOD CONTROL DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BY: \_\_\_\_\_ Date: \_\_\_\_\_

SAN BERNARDINO FLOOD CONTROL DISTRICT

BY: *Jerry Walker* Date: NOV 30 1992  
JERRY WALKER 92-1155  
Chairman, Board of Supervisors

SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD.

EARLENE SPROAT  
Clark of the Board of Supervisors  
of the County of San Bernardino

By: *Mary Louise Levasio*  
Deputy



NATIVE AMERICAN REPRESENTATIVE

BY: Yves Rocha Date: 4-7-93  
Chief, Ya Ana Gabrielson Nation

NATIVE AMERICAN REPRESENTATIVE

BY: Manuel Rocha Date: 4/7/93  
Spiritual Leader

**APPENDIX 1**  
**STANDARDS AND GUIDELINES FOR RESEARCH DESIGNS**

The research designs shall be consistent with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 44734-37) and take into account the Council's publication, *Treatment of Archeological Properties* (Advisory Council on Historic Preservation (draft) 1980), subject to any pertinent revisions the Council may make in the publication prior to completion of the research design, and the SHPO Preservation Planning Bulletin No. 5, *Guidelines for Archaeological Research Designs* (1991). They shall specify, at a minimum:

- the property, properties, or portions of properties where data recovery is to be carried out;
- any property, properties, or portions of properties that will be destroyed without data recovery;
- the research questions to be addressed through the data recovery, with an explanation of their relevance and importance;
- the methods to be used, with an explanation of their relevance to the research questions;
- the methods to be used in analysis, data management, and dissemination of data, including a schedule;
- the proposed disposition of recovered materials and records;
- proposed methods for involving the interested public in the data recovery;
- proposed methods for disseminating results of the work to the interested public;
- proposed methods by which the participants to the Programmatic Agreement, including the Gabrielino Indian representatives, will be kept informed of the work and afforded the opportunity to participate; and
- a proposed schedule for the submission of progress reports to the SHPO.

**APPENDIX 2**  
**STANDARDS AND GUIDELINES FOR THE HISTORIC PROPERTIES**  
**MANAGEMENT PLAN**

The Historic Properties Management Plan (HPMP) for Prado Dam Basin shall be prepared in accordance with the following guidelines.

1. The HPMP will be prepared by or under the supervision of an individual who meets, or individuals who meet, at a minimum, the "professional qualifications standards" for archeologist, historian, and architect in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

2. The HPMP will be prepared with reference to: (a) the Secretary of Interior's *Standards and Guidelines for Preservation Planning* (48 FR 44716-20); (b) the *Section 110 Guidelines* (53 FR 4727-46); and (c) U.S. Army Corps of Engineers regulations, *Project Construction and Operation Historic Preservation Program*, ER1130-2-438.

3. The HPMP will be prepared in consultation with the San Bernardino County Museum and Native Americans representing the Gabrielino people.

4. The essential purpose of the HPMP will be to establish processes for integrating the preservation and use of historic properties with the mission and programs of the Los Angeles District, Corps of Engineers (COE) in a manner appropriate to the nature of the historic properties involved, the nature of Prado Dam Basin, and the nature of the COE's mission, programs, and planning processes.

5. In order to facilitate such integration, the HPMP, including all maps and graphics, will be made consistent with the data base management system used by the COE.

6. The HPMP will include the following:

a. Foreword. The foreword shall explain the basis upon which the HPMP is being prepared.

b. Introduction. The introduction shall explain the organization and use of the various sections of the HPMP.

c. Overview. This element of the HPMP will synthesize available data on the history, prehistory, architecture, architectural history, landscape architecture, past and present environment, and ethnography of Prado Dam Basin and its surrounding area, to provide a context in which to evaluate and consider alternative treatment strategies for different classes of historic properties. It will also include a brief description of previous archeological, historic, and ethnographic investigations conducted within the basin.

d. Inventory. This element of the HPMP will include descriptions of all properties within the basin that are known or thought to meet the National Register criteria (36 CFR 60.4), including but not limited to the following information on each property: (1) the class of historic property; (2) the location and areal extent of the property; (3) the current status and integrity of the property; and (4) the National Register

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criteria that the property is known or thought to meet and the documentation supporting this determination.

e. Predictions. Based on the overview, this element of the HPMP will predict the distribution and nature of buried properties that have been identified through old maps and other historic archives, and, if applicable, structures that are not of sufficient age, but should be evaluated for National Register eligibility in the future. This element will also offer an estimate of the accuracy of the predictions, and outline ways and the conditions under which the predictions will be tested, refined, and verified to the extent needed through test excavations, remote sensing, architectural, historic, and other further research.

f. Identification system. Based on the overview and predictions, this element of the HPMP will establish procedures for the identification and evaluation of historic properties that may be affected by operations, maintenance and land use activities within the basin. This element of the HPMP will take into account the *Section 110 Guidelines*, Section 110(a)(2), Discussion (b)(2) through (b)(10) as applicable, and will provide for identification and evaluation to take place in a timely manner during the planning of any actions that might affect historic properties.

g. Management system. This element of the HPMP will establish procedures for the management of historic properties within the basin, including but not limited to:

- i. procedures for the use of historic properties for agency purposes or the purposes of others, in a manner that does not cause significant damage to or deterioration of such properties, with reference to the *Section 110 Guidelines*, Section 110(a)(1), Discussion (b), and specifically providing for interpretation;
- ii. procedures for affirmatively preserving historic properties, with reference to the *Section 110 Guidelines*, Section 110(a)(1), Discussion (c);
- iii. procedures for the maintenance of historic properties, with reference to the *Section 110 Guidelines*, Section 110(a)(2), Discussion (d)(1)(i);
- iv. procedures for the avoidance or mitigation of adverse effects on historic properties, with reference to the *Section 110 Guidelines*, Section 110(a)(2), Discussion (d)(1)(iii);
- v. procedures for the treatment of properties discovered during any future undertaking; and
- vi. procedures for consultation with relevant parties during implementation of the HPMP, with reference to the *Section 110 Guidelines, Part III*.

## **Appendix E: Biological Assessment (BA)**





**Biological Assessment**  
**for**  
**Prado Dam Gas-line Removal Project**

**U.S. Army Corps of Engineers**

**Los Angeles District**

**June 2021**



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# Chapter 1. Introduction

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This Biological Assessment (BA) for the Prado Dam Gas-line removal (Proposed Project) has been prepared by the U.S. Army Corps of Engineers (Corps) in accordance with the requirements set forth under regulations implementing Section 7 of the Endangered Species Act (ESA) (50 C.F.R. Pt. 402). This BA evaluates the potential effects of the action on listed and proposed species and their designated and proposed critical habitat and determines whether any species or habitat are likely to be adversely affected by the action, as required in 50 CFR 402.12. This BA contains the information required to initiate formal consultation.

## 1.1. Purpose and Need of the Proposed Project

The Prado Dam Spillway Modification Project is the last major component of the Prado Dam element of the Santa Ana River Mainstream Project (SARMP) to provide the level of flood risk reduction authorized by Congress. In its current location, the high pressure, natural gas-line (L-2000) conflicts with the Prado Dam spillway and embankment raise construction and needs to be relocated away from the dam for the public safety of both facilities. Therefore, to raise the spillway safely and for structural soundness, a portion of the existing pipeline will first need to be removed or abandoned in place and a new pipeline installed along a different alignment by the Southern California Gas Company (SCG) (**Figure 3 & 4**). Thus, the purpose of the gas-line removal is to facilitate the Prado Dam Spillway Raise Project.

A separate BA and National Environmental Policy Act (NEPA) documentation will be prepared to address the effects of the Spillway Raise and a proposed Dam Safety Modification project.

## 1.2. Threatened, Endangered, Proposed Threatened or Proposed Endangered Species, Designated Critical Habitat

Below are the federally protected species and associated designated critical habitat that will be discussed in this document, as part of the Corps' formal consultation request under Section 7 of the ESA, as well as species that have the potential to occur in the vicinity of the project, but for which the Corps has made a no effect determination (and thus are not discussed further in this BA). Table 1 lists the federally listed species and designated critical habitat with the potential to occur within the Action Area (defined in Section 2), and the Corps' assessment of whether the Proposed Project has the potential to directly or indirectly affect those species or critical habitat based on habitat suitability and best available data. Supporting analyses are provided in Chapter 4 of this document.

**Table 1: Federally Endangered and Threatened Species and Critical Habitat**

Common Name	Habitat Requirements	Status	Corps' Determination
San Diego Ambrosia ( <i>Ambrosia pumila</i> )	Found in a variety of habitats along the coastal strip, inland valleys, and foothills at elevations below 2,000 ft, near vernal pools and in disturbed areas. Does not tolerate shade.	E	No Effect. No suitable habitat present within the action area, and not detected during 2021 surveys.
Thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	Typically grows in herbaceous plant communities such as grassland communities, alkali playa, and in vernal pools. In some locations, thread-leaved brodiaea grows in open areas associated with coastal sage scrub.	T	No Effect. No suitable habitat is present within the action area, and not detected during 2021 surveys.
Delhi sands flower-loving fly ( <i>Rhaphiomidas terminatus abdominalis</i> )	Found only in areas of the Delhi sands formation in southwestern San Bernardino and northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition requires shade.	E	No Effect. No suitable habitat is present within the action area. Not detected during 2021 surveys.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	Nesting summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, or mesquite.	E	May Adversely Affect
Least Bell's vireo Critical Habitat		D	May Affect, Not Likely to Adversely Affect
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Nesting habitat of riparian woodlands in southern California.	E	No Effect. No suitable habitat is present within the action area.
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	Obligate, permanent resident of coastal sage scrub in southern California. Low, CSS in arid washes, on mesas and slopes. Not all areas classified as CSS are occupied.	T	May Adversely Affect

Santa Ana Sucker ( <i>Catostomus santaanae</i> )	Endemic to Los Angeles basin and south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	T	No Effect. All impacts to waters will be avoided by using horizontal directional drilling (HDD).
E = endangered, T = threatened, D = designated			

### 1.3. Description of Proposed Project

#### 1.3.1. Project Location

The Proposed Project is located in the city of Corona, Riverside County, California adjacent to the Santa Ana River (Prado Dam Outlet Channel). The project area is bordered by State Route 71 (SR-71) to the west, State Route 91 (SR-91) to the south, and the Prado Dam Embankment to the north (**Figure 1**). The current pipeline runs north of the spillway and along the south side of the Dam Embankment (**Figure 2**). The spillway is directly adjacent to Prado Dam Embankment and the Prado Dam Outlet Channel.

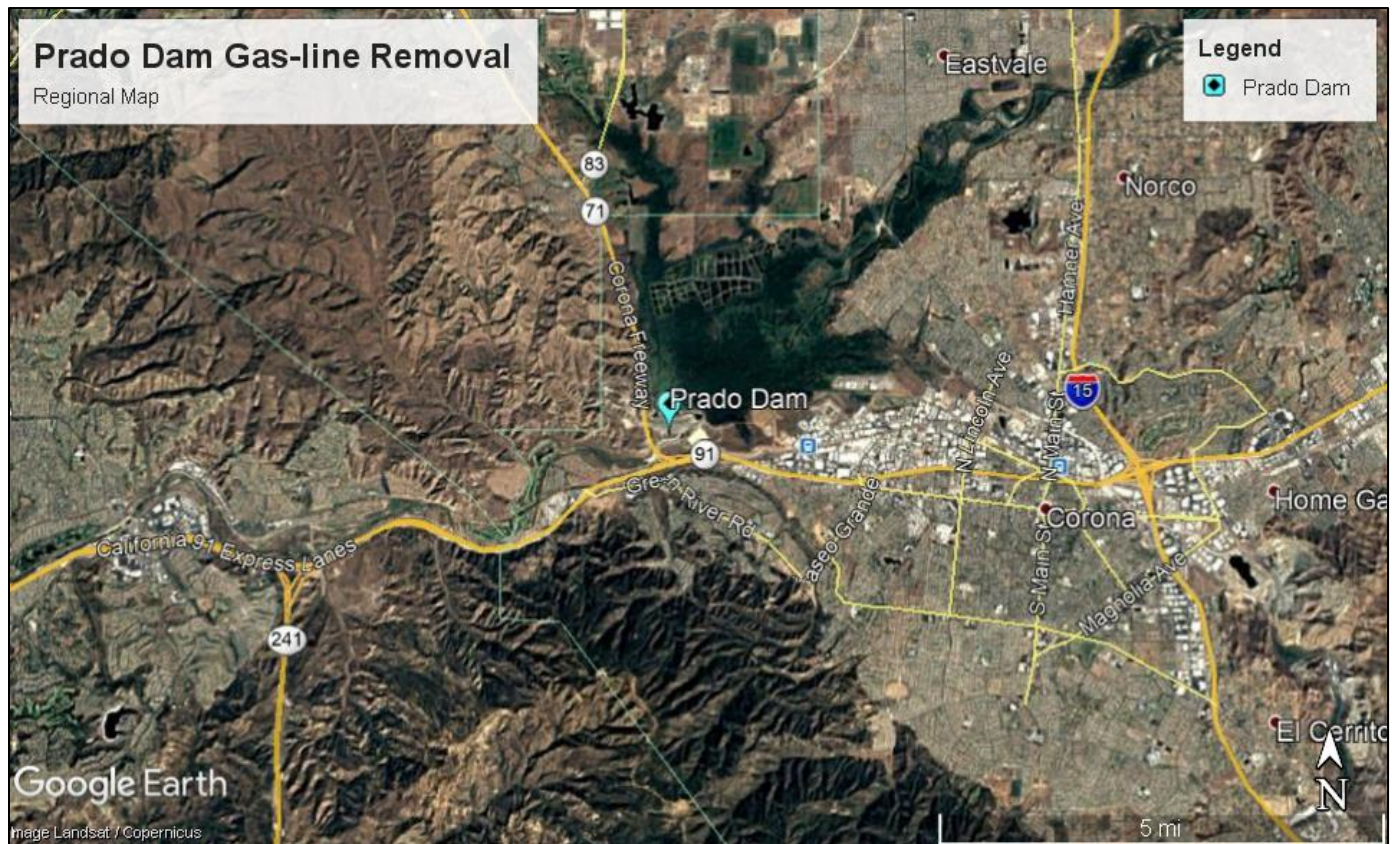
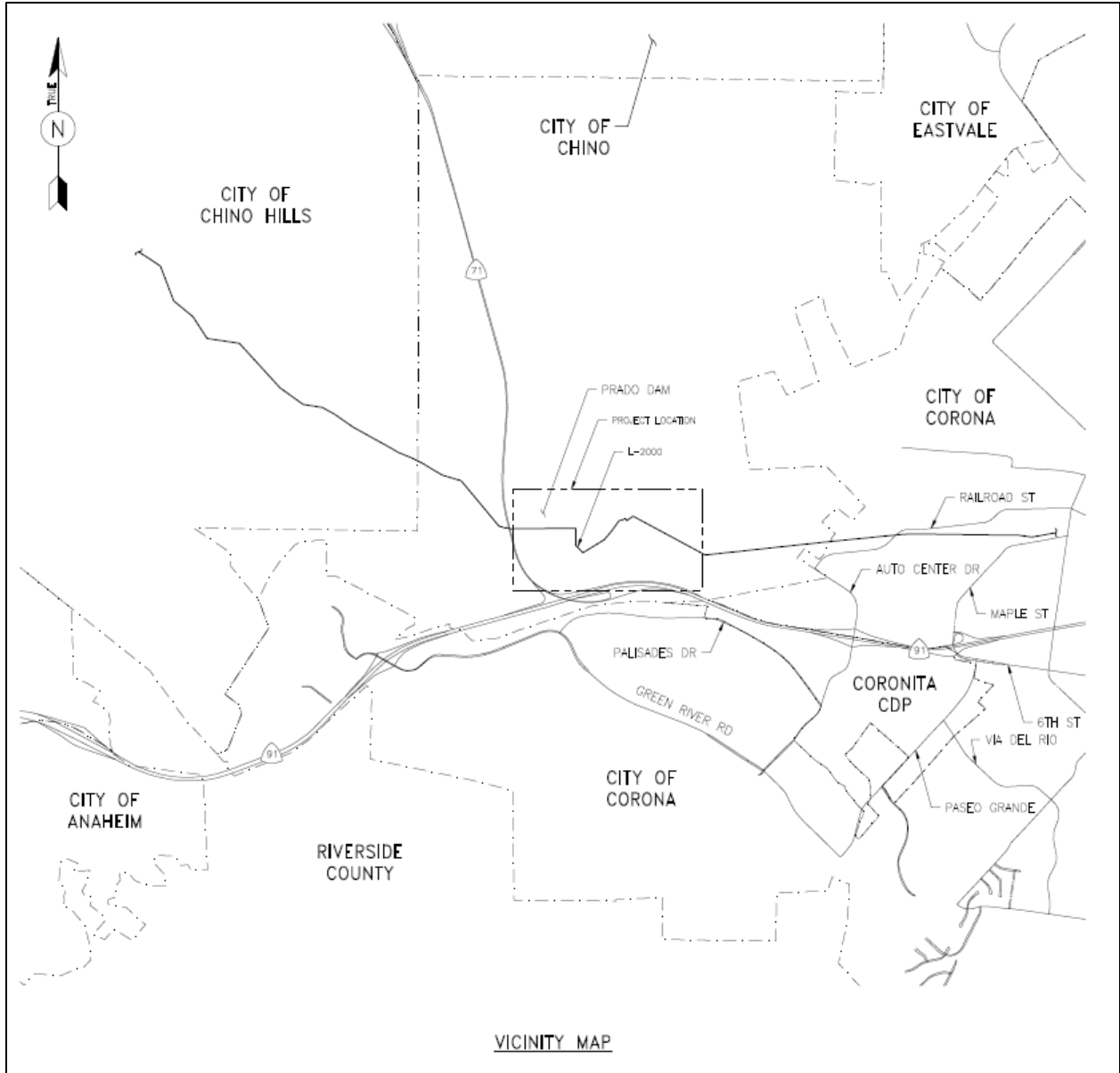


Figure 1. Regional Map





**Figure 2. Project Boundary and Existing Gas-line**

### 1.3.2. Project Description

The project consists of two main phases 1) removing or grouting in place the old gas-line, and 2) relocating the new gas-line. “Relocation” refers to installation of new pipe in a different alignment; existing pipe would not be moved to a new location. The new alignment would start northeast of the spillway, then following almost parallel to the SR 91 highway, then north west towards the area between the Prado Dam Embankment and the SR 91 highway, where it would tie into the existing gas-line as shown on Figure 4.

### Grout in Place Pipeline Abandonment and Removal

Portions of the pipeline that will be abandoned in place would be filled with grout. Partial abandonment rather than full removal of the entire pipeline is proposed in order to reduce excavations in the vicinity of the outlet channel and prevent damage to the outlet channel lining. Grout would be designed to compensate for potential shrinkage and installation would incorporate procedures to ensure the full filling of the pipe. The pipe would be video-inspected and cleaned per Federal Emergency Management Agency Technical Manual 484 (Reference 6.h) guidance prior to grouting. If the pipe is deteriorated or damaged and cannot be safely grouted, a new abandonment approach would be developed. Removal is planned for the existing pipeline at the toe of the dam and sections near but outside of the channelized outlet (**Figure 3**). Grout in-place is planned for the portion that is north of the spillway and the portion that extends underneath the channelized outlet. Based on SCG Geotechnical Engineering consultant analysis, the pipeline that would be left in place would not create a hazard or leach any contaminants into the soil. Sections of pipeline to be removed would be located using potholing and tested for asbestos before removal. No asbestos is anticipated to be found based on the type of pipe that was installed, but in the rare possibility that a pipe tests positive for asbestos, remediation would occur. The soil removed would be backfilled.



Figure 3. Proposed Grout in Place and Gas-line Removal

### Pipeline Relocation

The new pipeline installation connects from an existing (unaffected) gas line segment located on the east side of the spillway, extending south of the spillway along the 91 freeway, crossing under the outlet channel and connecting back to the existing gas line near the SR-71. Sections of pipe would be installed by digging an approximately 6' wide and 7' deep open trench for a total of 0.91 miles on either side of a 0.25 mile-long HDD path under the outlet channel. The excavator used for the trench segments would require a 75'-wide workspace to dig, stockpile soil, and install the new pipeline. The soil dug out to place the new gas-line would be stockpiled within the 75' TCE, and reused to cover

the pipeline. Any remaining soil would either be used to fill in areas where pipeline is removed permanently or spread and graded within Temporary Construction Easement (TCE) areas. HDD requires a string layout area, where the pipe would be fabricated before going underground. Vegetation removal would occur within the open trench segments but is not anticipated for the HDD segment, other than minor removal that may occur at the boring entry and exit. Boring entrance would begin on the southeast side of the outlet channel and exit on the northwest side of the channel, close to its connection to the existing pipeline near SR-71 (**Figure 5**). HDD involves boring a hole using a drill to tunnel underneath the outlet at a 15-degree angle. The truck would require a workspace at the entrance and exit. The pipeline that would be installed is a new 30-inch high pressure pipeline that meets current standards. Most of the work will be done from 7am to 5pm except under two conditions. The first condition would be during HDD pullback, which is when the pipe would be pulled through the HDD tunnel. This must be completed as quickly as possible, so the tunnel does not collapse. This work would take minimum 24 hours and maximum 48 hours to complete. The second time work will go beyond 5 pm is during the gas-line tie-in, which is when the new gas-line is being reconnected with the existing pipe. The gas must be shut off during this time, therefore the work will be done as quickly as possible but would take a minimum of 24 hours to a maximum of 48 hours to complete. For both HDD pullback and tie-in, multiple mobile light towers will be required to maintain a safe work environment along with two cranes, two reach lifts, x-ray van, multiple company trucks. Nighttime work would require use of lighting to illuminate work areas including access roads and ensure worker safety. Lights will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement.

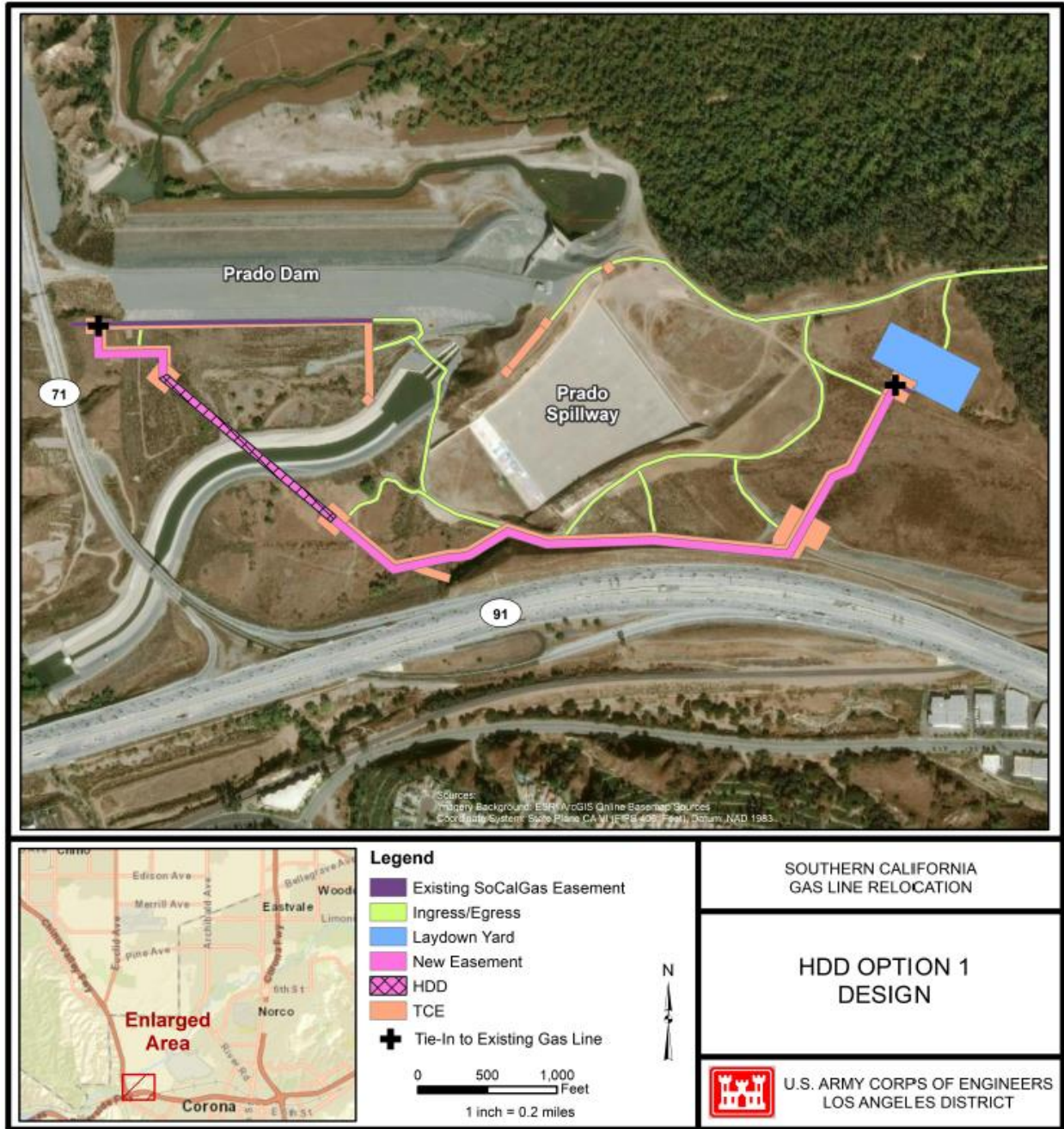


Figure 4. Proposed Alignment.

### Staging, Borrow Sites, TCE and Access Routes

A 3.77 acres staging area for construction equipment is planned on an open area northeast of the spillway (blue polygon titled laydown yard in **Figure 3**). Already-established roads will be used to drive equipment to staging area. A work space is required for the HDD drill entrance and exit. This project does not require a borrow site. No new roads will be created, and crew members will use existing maintenance roads for access.

## **Schedule**

Construction for the gas-line relocation is scheduled to begin October 20, 2021 and is planned to end by April 2022. The gas-line relocation includes pipeline installation via trenching and HDD and vegetation removal (between September 15<sup>th</sup> through February 15<sup>th</sup>). After the new gas-line has been installed, then the gas-line removal and grout in place will begin, and continue beyond February 15<sup>th</sup> and conclude in April 2022.

### **1.3.3. Future Operation and Maintenance**

Typical operations and maintenance of the pipeline are minor and infrequent. SCG perform typical leak detection inspections either via drone or truck, depending on access. Inspections occur on an infrequent basis which is about every 5-7 years. The method of inspection typically does not cause any disturbance above ground as the pipe is inspected via an internal tool. Per California Fire Marshal regulation, SCG is required to have quick access to their pipeline in case of emergency. For these kinds of emergencies, existing access is sufficient.

### **1.3.4. Environmental Commitments**

Environmental Commitments are measures that would be implemented to avoid, minimize, and offset impacts to the federally listed species and designated critical habitat associated with the Proposed Project.

Commitments relate to avoiding or minimizing impacts during construction (for instance, conducting pre-construction surveys, ensuring activities remain within the authorized footprint, limiting noise intrusions through monitoring and use of sound barriers, etc.); restoring temporarily impacted areas after construction, and providing offsite habitat restoration in another location in the watershed to offset temporal losses that occur within the Action Area.

Onsite habitat restoration activities would meet the following conditions:

- Restoration activities would be initiated immediately following the completion of the construction, avoiding California Gnatcatcher (CAGN) and least Bell's vireo (LBVI) disturbance if during the nesting season.
- Success criteria would include a minimum of 30% native ground cover with less than 10% invasive plant cover.
- The establishment of a monitoring protocol that documents the maintenance and status of native and non-native cover in the restored area, in order to scientifically show success of native habitat establishment. This includes documenting the following characteristics:
  - Structure and composition of the restored plant community
  - Wildlife occupying restored habitat

#### **1.3.4.1. ENVIRONMENTAL COMMITMENTS**

- 1** All vegetation removal must occur between September 15<sup>th</sup> to February 15<sup>th</sup> to avoid impacts to CAGN, LBVI and other nesting birds.
- 2** A Biological monitor approved by the Corps' Environmental Resources Branch will monitor construction activities to ensure compliance with all environmental commitments.
- 3** Prior to construction activities, the Corps-approved biological monitor shall conduct pre-construction environmental training for all construction crew members. The training shall focus on required avoidance/minimization measures and conditions of regulatory agency permits and approvals. The training shall also include a summary of sensitive species and habitats potentially present within and adjacent to the Proposed Project area.
- 4** Portable sound walls will be required for work occurring between February 15<sup>th</sup> to September 15<sup>th</sup> of any year.
- 5** The construction contractor will be required to monitor noise regularly during the nesting season (February 15 – September 15). Ambient noise levels will be recorded by the Corps-approved biological monitor prior to the nesting season, or prior to construction during that period to ensure that 1) noise does not exceed 60 dBA for LBVI and 73dB for CAGN, or another agreed upon limit with the USFWS, within occupied CA Gnatcatcher and least Bell's vireo habitat during nesting season; or, (2) noise does not exceed 5 dBA above ambient conditions if said levels are above 60 dBA LBVI and 73 dBA for CAGN, or another agreed upon limit. If construction noise levels within occupied adjacent habitat cannot be reduced below 60 dBA LBVI and 73 dBA for CAGN or another agreed upon limit, during nesting season of any year, and if those exceedances are documented to occur on two or more consecutive days, the Corps or project proponent will offset impacts at a 1:1 ratio per any period during the breeding season affected by such noise levels. This 1:1 ratio will be based on the acreage of occupied coastal sage scrub or riparian habitat outside the project footprint subject to noise levels above agreed-upon thresholds during the nesting season, per the number of breeding seasons affected (e.g., 1 acre of coastal sage scrub habitat affected by noise in two breeding seasons will result in 2 acres of restoration). The area affected will be determined by the periodic project noise monitoring. The Corps will identify restoration areas for offsetting noise impacts in coordination with USFWS and will maintain (continue weeding) those areas for a period of 5 years.
- 6.** In addition to revegetating temporary impact areas, and to address temporal impacts, the Corps will perform or require offsite restoration at a 1 to 1 ratio for all coastal sage scrub habitat impacted by the proposed project (e.g., 1 acre of coastal sage scrub habitat impacted by proposed project will result in 1 acres of offsite restoration), Offsite restoration area(s) will be identified in coordination with the U.S. Fish and Wildlife Service prior to completion of construction. Offsite restoration sites will be actively managed (weeded, planted, irrigated as needed) for a period of 5 years or until success criteria (as defined above) are met (a) for work areas that don't overlap with the potential future spillway project, the gas line project

would provide offsite 1:1 mitigation (restoration would occur within areas that are outside of the spillway TCE) and, (b) for work areas that do overlap with the potential future spillway TCE, this BA assumes that the spillway project will perform any required onsite and/or offsite mitigation for direct impacts to that habitat. If the spillway project is not approved for construction within 2 years of the relocation, or if the TCE changes (and overlap is reduced), then the Corps will conduct or require 1 acre of offsite restoration for each acre directly impacted by the gas line work.

**7** A storm water pollution prevention plan (SWPPP) and soil erosion and sediment plan will be developed prior to construction to minimize erosion and identify measures to eliminate or control pollution sources onsite during and following the construction phase. The SWPPP will determine specific Best Management Practices (BMPs) needed during the project construction phase and after to minimize erosion, identify specific pollution prevention measures that will eliminate or control potential point and non-point pollution sources onsite, and to avoid causing or contributing to any water quality standard exceedances.

**8** Dust control measures will be implemented during the construction phase to reduce excessive dust emissions. Methods for reducing dust emissions may include wetting work areas by water truck on a regular basis such as dirt access roads and sediment stockpiles, as well as covering truck beds carrying material and stockpiles.

**9** Corps-approved biological monitor will continue to monitor and survey the Proposed Project area and adjacent habitats throughout construction and restoration activities for the presence of special status species, and will confirm that conservation measures are sufficient to avoid or minimize impacts to these species, or shall recommend additional measures as warranted.

**10** Upon construction completion, the contractor will immediately re-vegetate bare and disturbed areas with a native hydroseed mix approved by the Corps and depending on the time of year the hydroseed is placed, temporary supplemental watering may be needed. Watering need and frequency for hydroseeded areas will be approved by the Corps to ensure successful germination and establishment of native vegetation. These restoration areas must be monitored and managed (weeded) for at least 8 years after construction to reduce the potential for infestation. However, any areas that overlap with the Prado Dam Spillway project (if or when that project is approved and funded) will transfer over to USACE for long-term monitoring after completion of Spillway construction (Figure 8).

**11** Best management practices shall be implemented to reduce impacts to native habitats, including the following:

a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement best management practices to prevent runoff carrying toxic substances from entering the Santa Ana River and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.

b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Riverside County Fire Department) and when activities may produce sparks. Emergency contacts for the Norco Fire Station No. 57 on Corydon Avenue will be established.

c. To the extent feasible, the contractor will prevent exotic weeds from establishing within the work site during construction. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.

**12** Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the TCE including designated staging areas or routes of travel. The construction area(s) will be the minimal area necessary to complete the Proposed Project and will be specified in the construction plans. Highly visible barriers (such as orange construction fencing or sound walls) will be installed in sensitive habitats adjacent to the TCE to designate limits of construction activities. These barriers will be maintained until the completion of all construction activities.

**13:** Spill Prevention prepared a spill prevention, control, and countermeasure plan or soil prevention and response plan, as applicable, to prescribe BMPs to prevent hazardous material releases and ensure cleanup of any hazardous material releases.

**14:** Most work will occur during daylight hours (7am to 5pm) except during HDD pullback (pulling the pipe through the HDD tunnel) and Tie-in (reconnecting the gas-line). Lights required for nighttime work will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement.



## **Chapter 2. Environmental Baseline**

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A description and analysis of the existing conditions within the Proposed Project area and its vicinity, including descriptions of plant and animal species, natural communities, and special status species that have either been observed or have the potential to occur within the Proposed Project area. The information is based on surveys, literature reviews, and coordination with regulatory agencies and technical experts. The Proposed Project area and adjacent habitat have been surveyed by biologists from Santa Ana Watershed Association, Orange County Water District and Aspen Environmental Group to document the presence and locations of biological resources and sensitive species. California Department of Fish and Wildlife (CDFW), USFWS, and California Native Plant Society (CNPS) sensitive species occurrence databases were reviewed for the localized area. This section summarizes the results of database reviews and surveys in order to present an up-to-date and thorough description of the existing conditions.

### **2.1. Define Action Area**

The Action Area includes the entire project footprint that contains project actions including the permanent footprint, temporary construction easement, and staging area, plus a 200-foot buffer around each area (**Figure 3**). Where activities are within or adjacent to occupied or suitable habitat for Federally listed species, the buffer was extended to 500 feet to account for a larger indirect effect caused by noise. The Action Area includes the area subject to direct impacts within the footprint as well as the surrounding area subject to indirect impacts such as noise, vibrations or dust that extend beyond the project footprint.

### **2.2. Habitat Condition in the Action Area**

The project spans across the channelized outlet of the Prado Dam. The Santa Ana River conveys flow southwest within the Action Area and remains channelized within the Action Area. The topography of the Action Area ranges from flat especially in the disturbed areas to steep hills near the SR-91. Within the Action Area the habitat is a mix of disturbed, nonnative upland habitat, and native upland species. The native habitat is mainly composed of coastal sage scrub while the non-native upland habitat is mainly mustards and other ruderal species.

### **2.3. Vegetation**

Vegetation within the project area is mainly composed of coastal sage scrub communities. Most of the project area's vegetation was surveyed by Aspen in 2020 and the remainder of the project area was mapped by an expert biologist familiar with the area and its vegetation. The native and disturbed vegetation communities are interspersed; therefore, breaks in community type are determined based on dominant species type and professional judgment of the biologist surveying. There are a total of three main vegetation and cover types within the Action Area. Maps were created using ArcGIS with recent basemap imagery. The plant communities in the Action Area are

considered important nesting habitat for CAGN. In addition, the Action Area includes designated critical habitat for least Bell's vireo. Both native and non-native habitats provide important foraging and refugia habitat for a variety of sensitive plants and wildlife species.

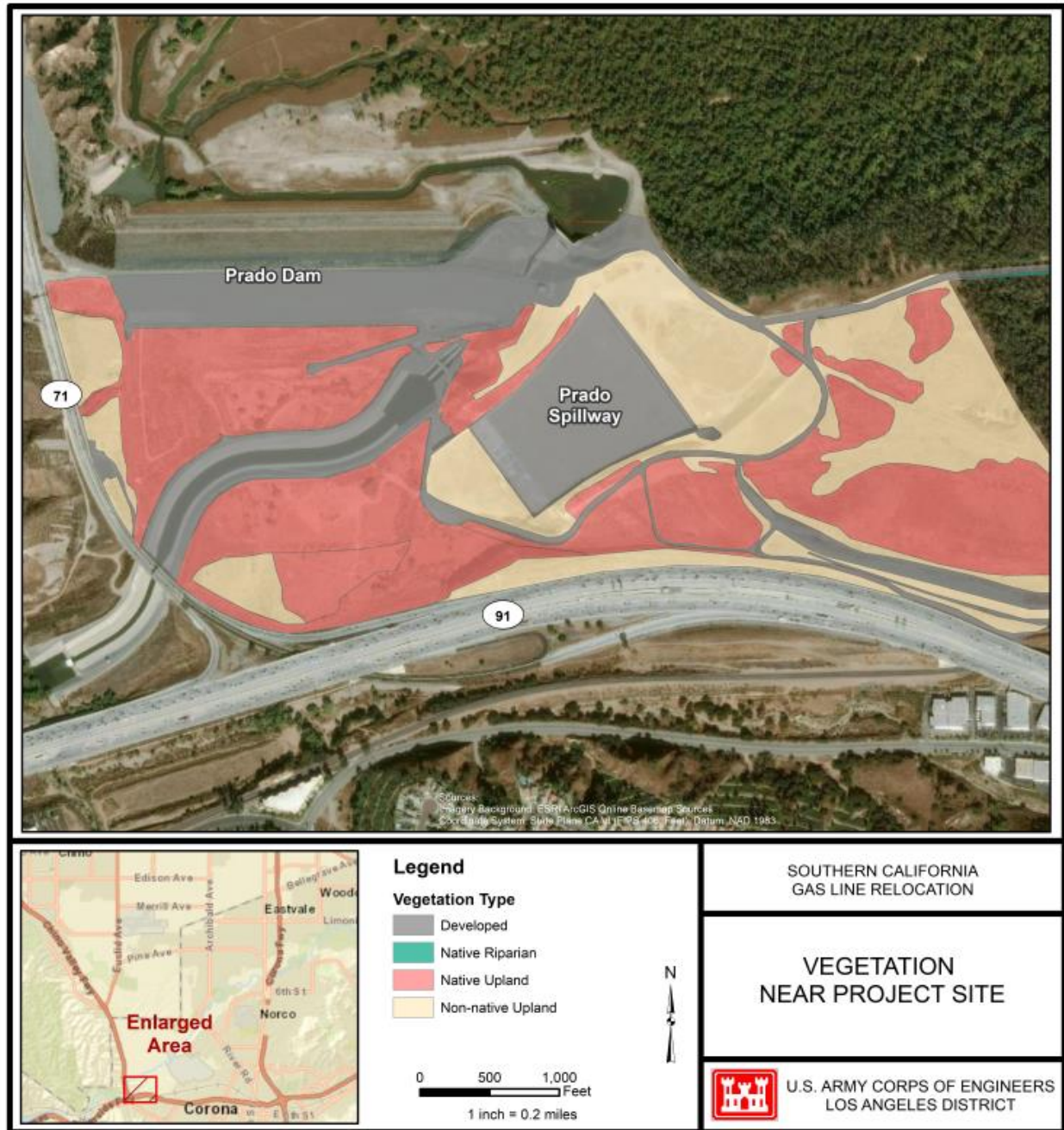


Figure 5. Vegetation Map

### 2.3.1. Coastal Sagebrush (Native Upland)

Upland vegetation in the project area is best classified as coastal sage scrub and is dominated by California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and

brittlebush (*Encelia farinose*). All native upland vegetation within the project area was restored as part of previous work at Prado Dam over the last twenty years. The native upland vegetation in the project area is occupied by threatened coastal California gnatcatcher (*Polioptila californica californica*).

### **2.2.2 Non-native Upland (ruderal species)**

Non-native uplands within the project area are dominated by non-native grasses and herbs such as ripgut brome (*Bromus diandrus*), foxtail brome (*Bromus madritensis spp. rubens*), wild oat (*Avena* spp.), wall barley (*Hordeum maurinum*), and Russian thistle (*Salsola tragus*). The species are widespread in and adjacent to the project area. Non-native uplands are present in patches surrounding the spillway and throughout much of the borrow area. Non-native uplands provide very little wildlife habitat and are not known to be occupied by any threatened or endangered species.

### **2.2.3 Developed / Disturbed**

Developed areas include the existing spillway, portions of Prado Dam, and a network of unpaved access roads throughout the project area. These developed areas are either unvegetated or sparsely vegetated with non-native species such as those discussed above under non-native uplands. Developed areas provided very little habitat for wildlife species.

## **2.4. Aquatic Resources**

The National Wetland Inventory (NWI) maps a riverine feature on the left-hand side of the channelized outlet, but based on aerial imagery, there is no riparian vegetation, no ordinary high-water mark, or water present to suggest a riverine waterway. Water may run along the base of the hill from the culvert on the upper left-hand side, but not enough water is present to support wetland plant species or other aquatic resources. Furthermore, NWI most likely maps a river there because that was the previous location of the Prado Embankment outlet channel. Originally the outlet was at the base of that hill on the left-hand side of the dam which was later moved to its current location. Therefore, no jurisdictional delineation was conducted.

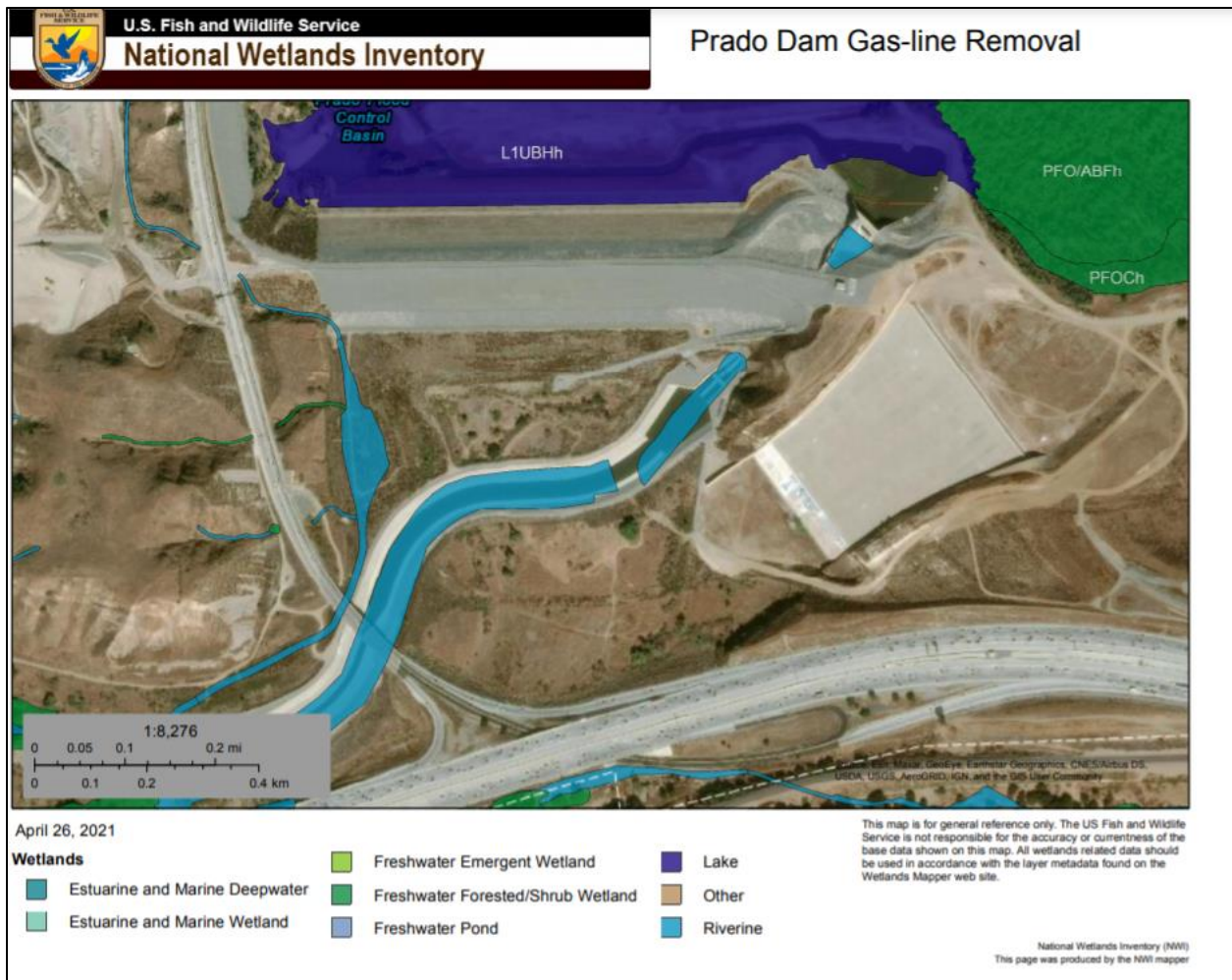


Figure 6. National Wetland Inventory Map

Table 2. Total Acreage of Potential Jurisdictional Wetlands/Waters

Jurisdictional Habitat			
	Total Potential Jurisdictional Waters of the U.S.		Total Potential Jurisdictional Waters of the State
	Wetland Waters (Acres)	Non-wetland Waters (Acres)	CDFW Waters (Acres)
<b>Total</b>	0	0	0

## 2.5. Wildlife

The riparian and upland community types that occur in the Santa Ana River watershed provide habitat for a variety of resident and migratory wildlife species including several special status species. Of particular importance are riparian and streambed areas that provide potential habitat for the federally threatened Santa Ana sucker (*Catostomus santaanae*), federally and state-

endangered least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii exitmus*), Coastal California gnatcatcher (*Polioptila californica californica*), and various raptor species.

The project lies entirely within upland habitats but is adjacent to riparian habitats and surface water. Due to development surrounding the majority of the project, the habitats within the project site function as a movement corridor and/or dispersal habitat for a number of wildlife species. Continuous riparian riverine habitat is upstream and downstream of the project area, increasing the likelihood of wildlife presence within and adjacent to the project area. Ongoing camera monitoring efforts by the Corps have revealed heavy wildlife use of the vegetated ramp over the main embankment of Prado Dam. This is an important crossing location because it allows wildlife to get up and over the dam without navigating through maintenance roads and other infrastructure necessary for operating the Dam. The area surrounding the Prado Spillway is critical for wildlife connectivity because it is one of the few remaining passageways into Prado Basin from Reach 9 to the west and the Cleveland National Forest to the south. Radio-collared bobcats and coyotes have been documented using the area around the Spillway heavily and it contains the core home range for several individuals.

## **2.6 Critical Habitat**

The staging area is within designated least Bell's vireo critical habitat. Already established roads will be used to stage heavy equipment. LBVI overwinter in Mexico but migrate north to breed in riparian habitats. Riparian vegetation includes Cottonwood forests, willows woodlands and riparian scrub. This habitat type is not found within or relatively close to the around the staging area. North of the road and staging area the vegetation is mostly non-native Eucalyptus trees.

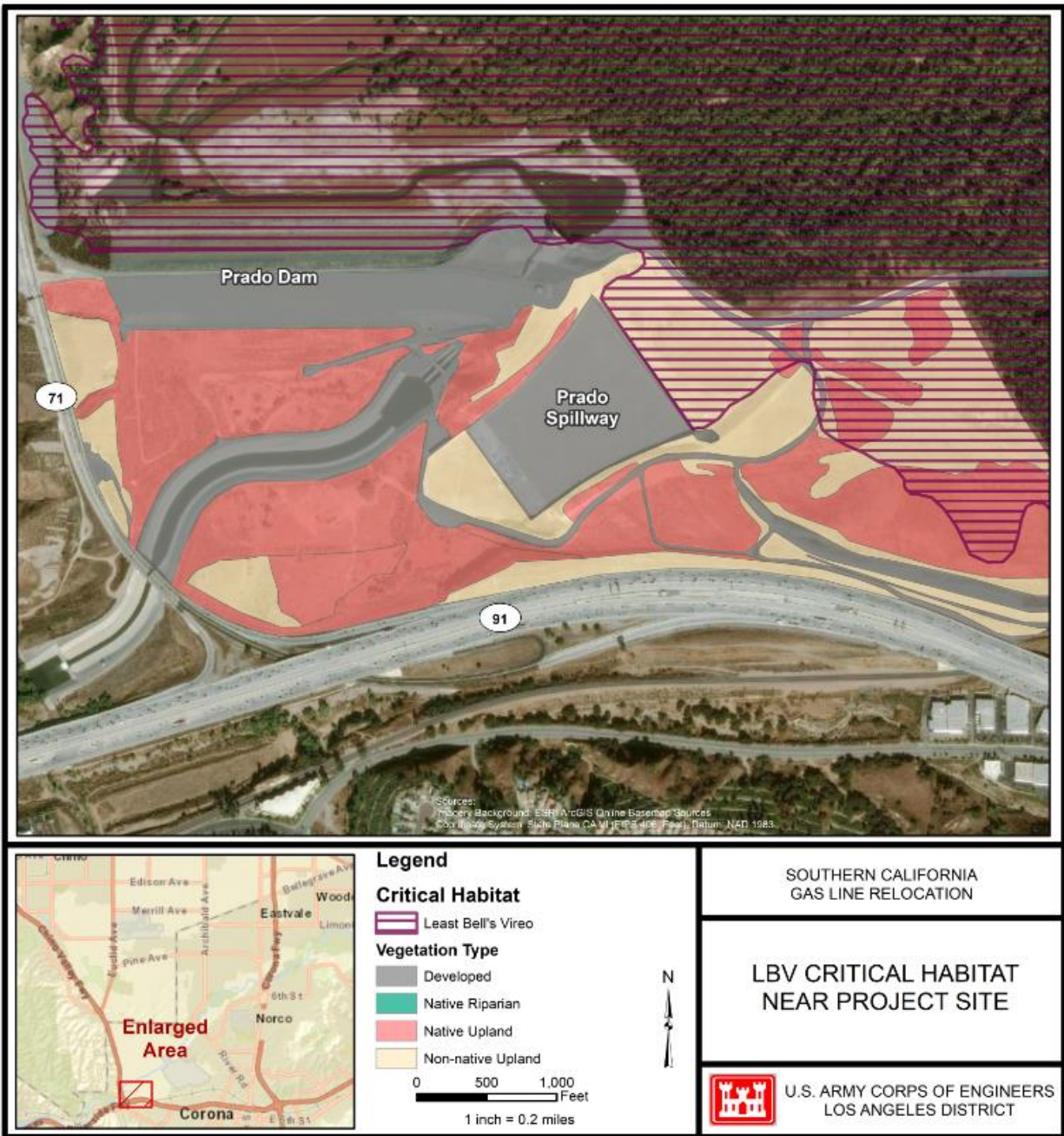


Figure 7. Designated Critical Habitat for Least Bell's Vireo.

## 2.7 Existing Projects

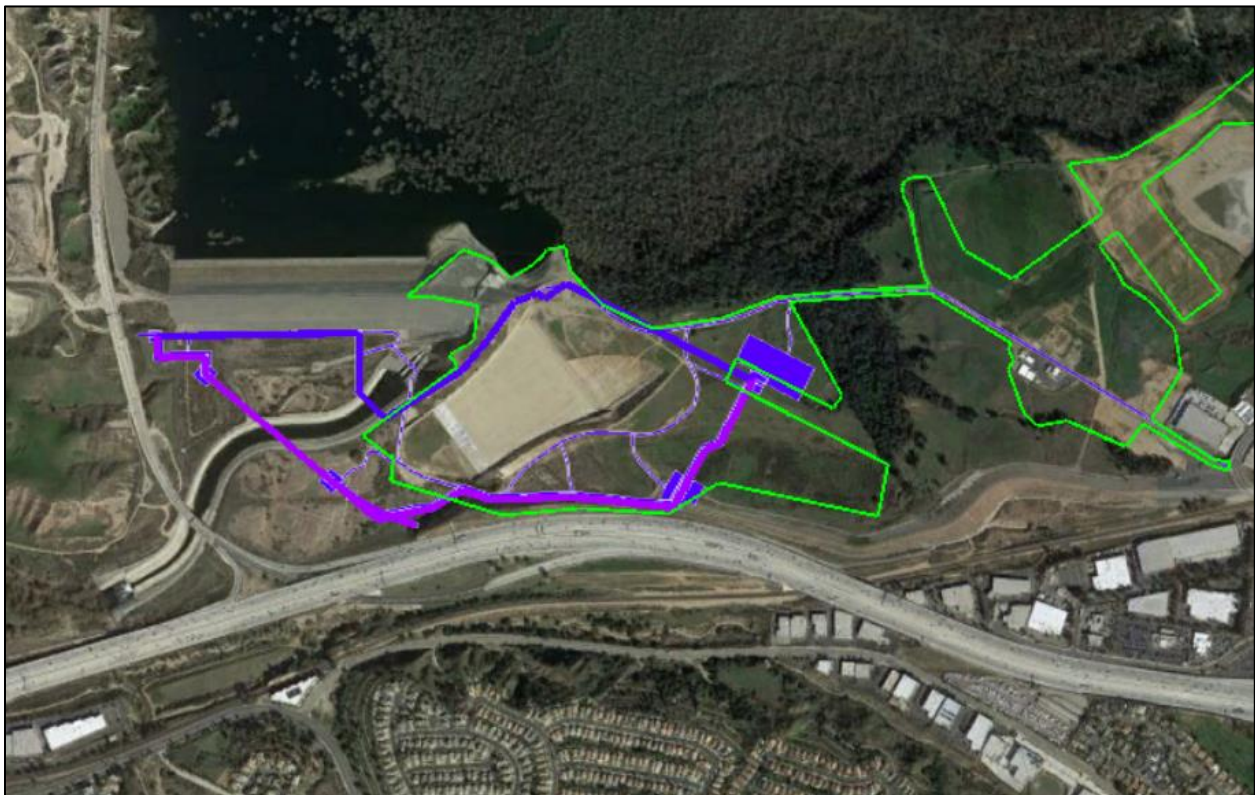
### Oak Mitigation Project (Ongoing)

To fulfill an environmental commitment from a previous construction project, the Corps agreed to plant oak trees at a 4 to 1 ratio. Approximately 31 oak saplings are expected to be impacted by

proposed project. Whenever possible, the oak saplings will be left in place. To ensure that some oak trees are retained, a Corps approved biologist or a Corps biologist, would go out and flag the oak trees within the TCE to see which ones can be kept. In addition, a majority of these oak saplings are only in the work area easement that is not in the direct line of trenching. Lastly, more trees than previously agreed upon were planted. Therefore, impacts to the oak mitigation project are considered insignificant. Watering and occasional site visit of the oak trees would result in negligible impacts on listed species and would not result in substantial negative cumulative effects along with the proposed action.

### **Spillway Modification Project (Planned)**

The spillway raise project, which is the final Prado Dam element of the Santa Ana River Mainstem Project planned to be constructed, would also include Dam Safety construction elements and would allow for full implementation of the Final Water Control Manual as addressed in the 2001 SEIS/EIR for SARMP. Construction of this project feature is planned to begin after the gas-line is removed and relocated, and would continue for approximately four to five years. The project footprint is just to the east of the proposed project and would impact a different footprint than the proposed action. Because both projects would hydroseed impacted areas and both projects would include offsetting measures, no substantial cumulative impacts are anticipated. Any areas overlapped by the Spillway Project will become the Corps responsibility for vegetation monitoring.



**Figure 8. Gas-line Project Footprint (purple) versus Spillway Footprint (green).**





# **Chapter 3. Federally Listed/Proposed Species and Designated Critical Habitat within Action Area**

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## **3.1. Federally Listed/Proposed Species**

Of the seven federally listed wildlife species reviewed (2 federally listed plant species, one insect, one fish, and three birds), the least Bell's vireo (*Vireo bellii pusillus*), and California Gnatcatcher (*Poliopitila californica californica*) were determined to potentially occur within the Action Area and would potentially be affected by the Proposed Action based on species requirements and Action Area conditions. The Action Area is mainly coastal sage scrub with non-native patches. Critical habitat was assessed by federal mapping and presence of Physical and Biological Features (PBFs, formerly PCEs) within the mapped areas. PBFs are features that are essential to the conservation of the species. These features includes species needs for life processes and successful reproduction such as: space for growth or individuals and populations, cover and shelter for different life stages of a species, biological and physiological requirements, sites for breeding and rearing of offspring, germination, seed dispersal, and historical habitat or habitat protected from disturbance.

The following sections discuss the species of concern, results of surveys, and critical habitat designation in the Action Area.

## **3.2. Least Bell's Vireo**

Least Bell's vireo is a federal and state endangered species and a Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) covered species. Least Bell's vireo is found as a summer resident of Southern California where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet. The least Bell's vireo breeds in dense, shrubby riparian vegetation, often dominated by willows (Franzreb 1989). Nests are typically found in dense vegetation located low in the riparian zones, most frequently in 5- to 10-year-old stands. When least Bell's vireo nest in mature riparian woodlands, they nest in areas with a substantial, robust understory of willows as well as other plant species. Least Bell's vireo generally prefer semi-complex riparian habitats that have understory scrub and ample vertical complexity; riparian areas with no understory are less likely to be used. In California, a dense shrub layer associated with riparian habitat was found to be the most critical structural component of occupied least Bell's vireo habitat (Kus et al. 2010). In more xeric areas, this species will readily utilize unconventional habitats, including mesquites and tamarisk. In riverine habitat, in Southern California, this species typically utilizes territory sizes of about 2 acres on average (Kus et al., 2010).

### **3.2.1. Survey Results**

Annual surveys are conducted by the Santa Ana Watershed Association (SAWA). In 2020, SAWA reported a total of 719 territories in Prado Basin and a total of 2,293 territories in Santa Ana Watershed (SAWA 2020). Of the documented territories, approximately 3 were identified as

potentially occurring within the Action Area. Preliminary 2021 data, provided by SAWA identified 5 territories within the project area (Figure 11).

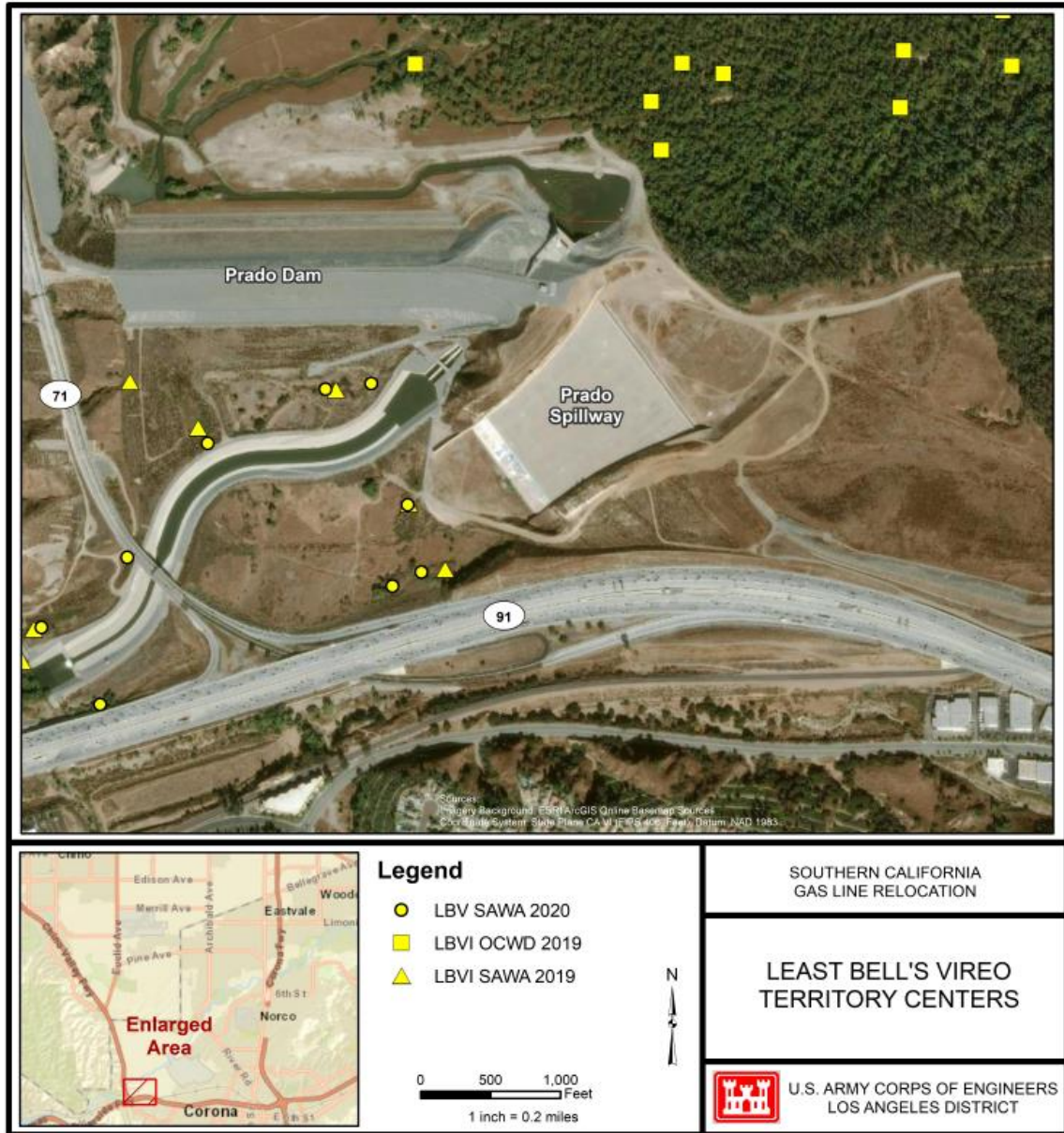


Figure 9. Least Bell's Vireo Territories.

### 3.2.2. Status of Designated Critical Habitat in the Action Area for Least Bell's Vireo

Designated critical habitat for this species occurs within the portion of the Action Area, although it does not contain the PBFs typically required for least Bell's vireo breeding and foraging. The Action Area within designated critical habitat consists of disturbed upland communities or are

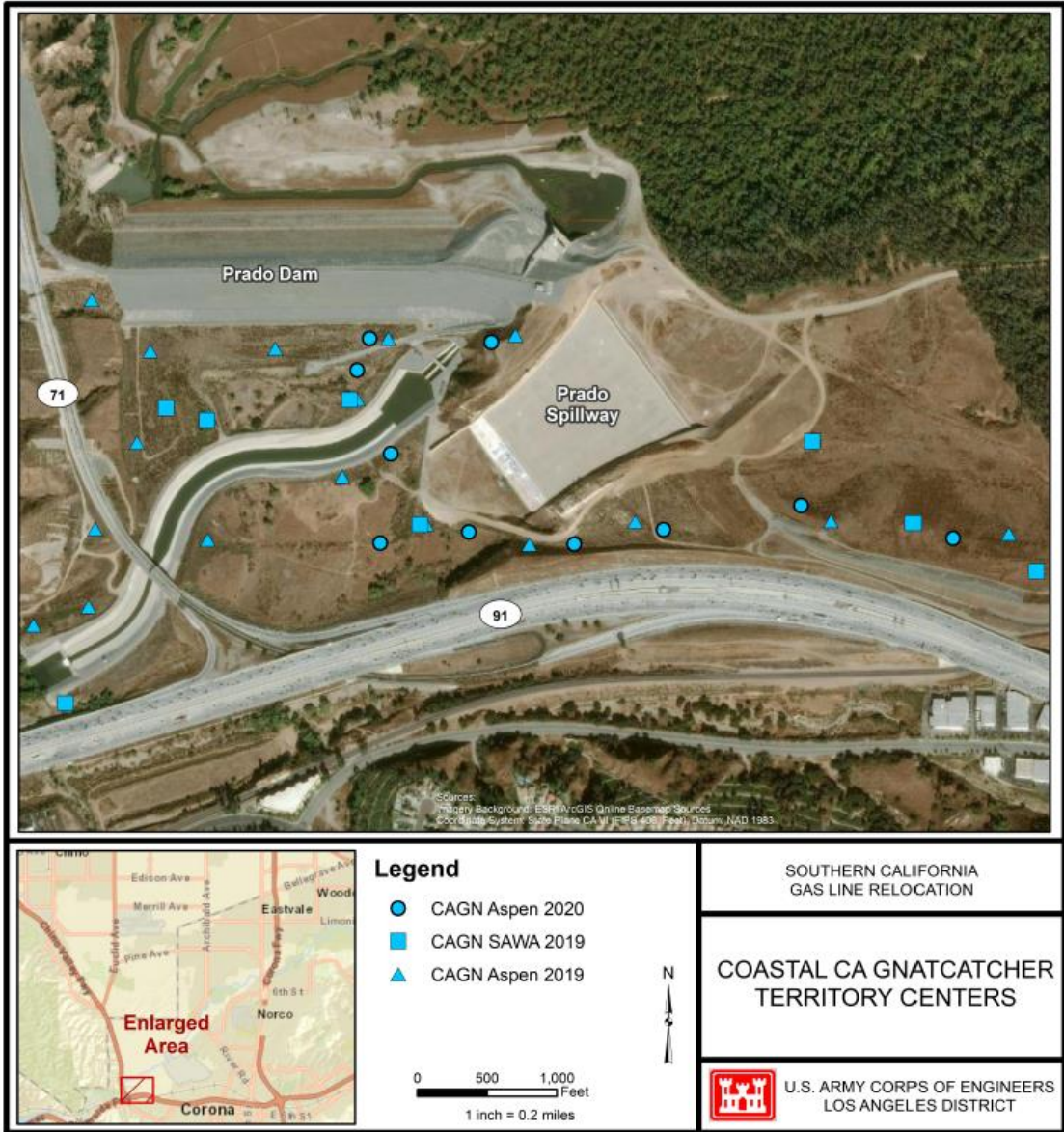
developed areas (i.e. ruderal, grassland and disturbed coastal sage scrub) that do not provide habitat for least Bell's vireo.

### **3.3. California Gnatcatcher**

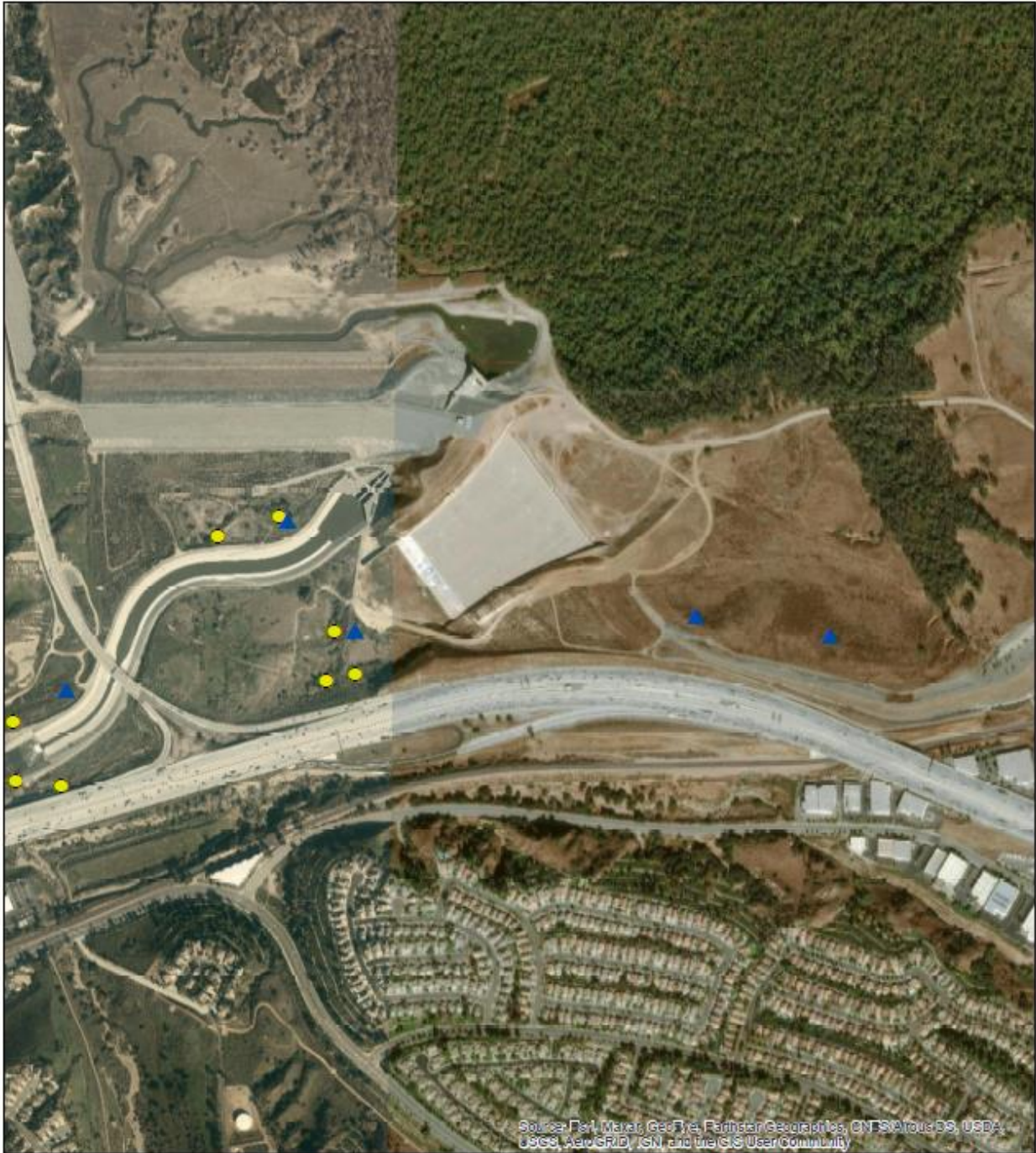
The California Gnatcatcher is a federally and state-listed endangered species and a Western Riverside MSHCP covered species. They live in coastal sage scrub, desert scrub, and coastal dune scrub year-round. In California, they occur along the coast in areas dominated by California sagebrush. They generally occur in areas less than 1,600 feet in elevation, but sometimes occur at higher elevation at inland scrub sites. In Baja California and Mexico, they occur in sparse desert woodlands, coastal dune scrub, and desert scrub. During the non-breeding season, they may forage in chaparral areas especially if it borders sage scrub. The project area contains suitable coastal sage scrub habitat. The California Gnatcatcher's diet includes leafhoppers, beetles, bugs, and spiders. Male California Gnatcatchers select a nest site in sagebrush, buckwheat, or other shrub species and create the nest at about 2.5 feet high, typically on the outer edges.

#### **3.3.1. Survey Results**

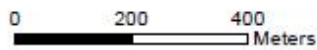
Annual surveys are conducted by SAWA in addition to the environmental consulting company, Aspen. About 11 to 14 CAGN territories are found within the action area (**Figure 10**). They both breed within the Prado Basin and live there during non-breeding season. Preliminary 2021 data, provided by SAWA identified 4 territories within the project area (**Figure 11**).



**Figure 10. CAGN Survey**



SAWA PRELIMINARY DATA - 2021



- ▲ CAGN
- LBVI

Figure 11. SAWA 2021 Preliminary Data

# Chapter 4. Effects Analysis

## 4.1. Effects of the Proposed Project on Federally Listed Species and Critical Habitat

The primary impacts from the Proposed Project will be from direct effects, primarily the temporary loss of habitat during trenching and other construction activities, and indirect effects of noise, dust and increased human presence that would cause impacts beyond the project footprint. Habitat loss within designated critical habitat or potentially occupied habitat for listed wildlife species is considered an adverse effect when this habitat contains PBFs required by the species. Noise from mechanized equipment performing actions such as vegetation removal, grading, transport of material, and excavation/drilling will likely affect the listed riparian and coastal sage scrub bird species present in the Action Area. Birds are sensitive to noise and may avoid the Action Area if noise is too loud. Vegetation removal within the Action Area would temporarily reduce the availability of foraging and nesting habitat and shelter from predators. However, vegetation removal would occur outside nesting bird season in order to minimize stress to or loss of nestlings, fledglings and parents. It is anticipated that adult birds would likely have more exposure to the stressors of noise and habitat loss while returning to establish territories where vegetation has been removed and human presence has increased. Per the 2020 Burlington Northern Santa Fe (BNSF) Bridge Project Biological Opinion (BO), least Bell's vireo did not abandon territories from 2018 to 2019 even while noise-increasing activities (pile driving) were occurring during the months when territory establishment takes place. Least Bell's vireo and California Gnatcatcher could be affected by removal or degradation of habitat and continued loud noise during construction of the Proposed Project.

### Vegetation Impacts

The proposed action would impact 23.42 acres of vegetation, 12.64 acres of which is comprised of coastal sage scrub (CSS) communities. The direct impact to listed species from the removal of native upland habitat (CSS), from trenching 6', would result in the temporary displacement of 2 CAGN and 2 LBVI territories (**Table 4 & 5**). Indirect and other effects to the species are discussed below. To reduce direct impacts to listed species, all vegetation removal will occur outside of nesting season between September 15-February 15 (Environmental Commitment #1 in 1.3.4.1). To offset temporal impacts caused by vegetation removal, offsite restoration for every acre of impact to CSS would be required (Environmental Commitment #6 in 1.3.4.1). In addition, all vegetated temporary construction areas will be restored with native habitat (Environmental Commitment #10 in 1.3.4.1).

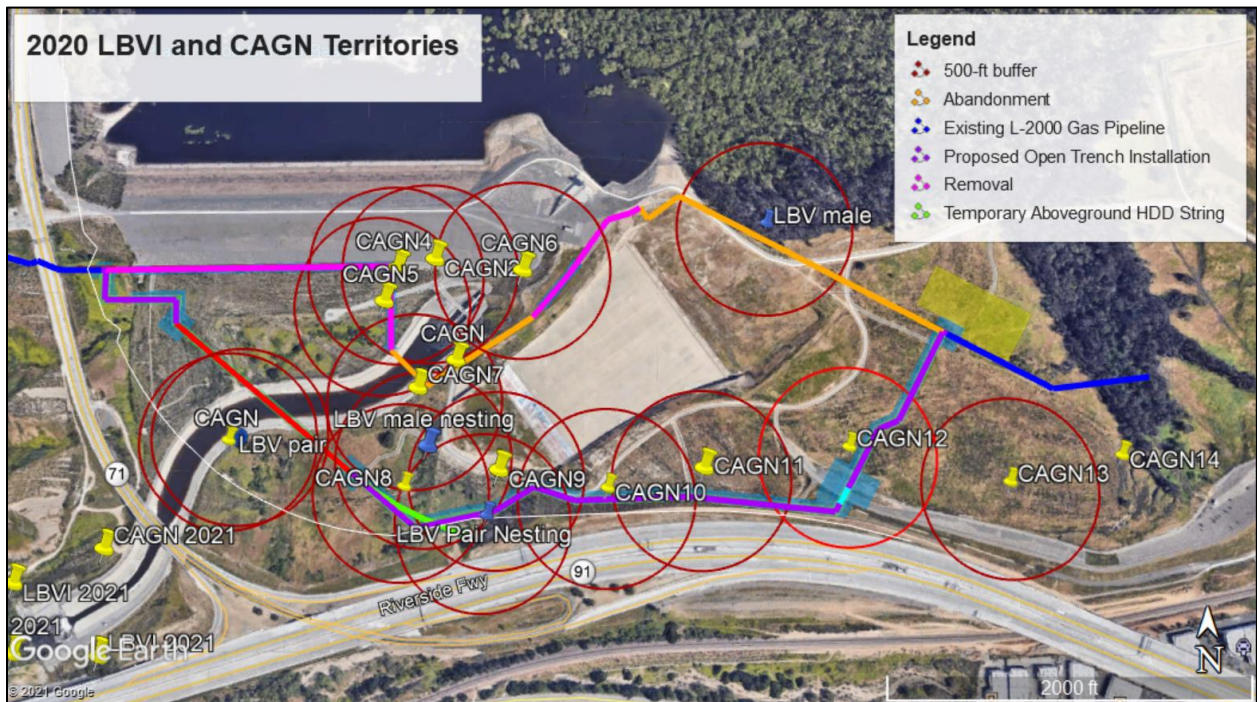
**Table 3. Summary of Vegetation Impacts**

Developed (Acres)	Native Upland (Acres)	
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12.65

12.64

\* *Temporary impacts do not include areas where work would occur underground only (HDD).*



**Figure 12. 2020 LBVI and CAGN Territories with 500-foot Buffer**



### California Gnatcatcher (CAGN)

About 19 territories are found within the action area. Based on the type of activity, equipment and estimated noise levels (with sound reducing measures in place), it is assumed that the direct (vegetation removal) and most of the indirect (noise and disturbance) effects of the proposed action would occur within a 500'-wide buffer surrounding each alignment. An excavator produces noise on average at about 87 decibels. The sound walls reduce sound about 5 decibels and around 500 feet noise levels are around 60 decibels. Therefore, the proposed action would potentially result in a temporary displacement of or effect to 11 territories that occur within this 500'-wide buffer (**Table 5**). Two of these territories occur within the direct footprint. Considering the large width of the floodplain, movement of gnatcatcher would not be constricted with the adjacent area. While gnatcatchers may still be able to successfully forage and nest within the vicinity and possibly within the 500' buffer zone, this analysis assumes an adverse effect to previously established territories within this area. Preliminary 2021 data provided by SAWA suggests lower impact to CAGN (0 CAGN territories impacted by direct and 3 from indirect) found in Figure 11. But the Corps and SAWA expect there to be higher numbers that were not caught during the site visit. Therefore, impacts to CAGN are based on 2020 territories.

Construction will continue past February 15<sup>th</sup> into CAGN nesting season (through at least April 2022). Most of the work that would occur during nesting season would likely be in less suitable habitat (removal and abandonment portion of construction). Those areas have fewer CAGN and LBVI territories. Dust can create a visual impairment and degrade air quality and human presence can cause CAGN to abandon territories and nests. Increased competition for nest sites and other resources could occur until construction is completed and onsite and offsite habitat restoration occurs.

The Proposed Project would temporarily impact 10.62 to 14.48 acres of well-established CSS communities. Because several CAGN territories will be temporarily displaced due to the proposed action, the proposed action May Adversely Affect CAGN.

**Table 4. California Gnatcatcher (CAGN) Impacts Per Alignment Option**

CAGN Territories in Footprint	CAGN Territories in 500' Buffer
2	12

*\* Territory numbers were conservatively estimated using survey data from 2020 breeding seasons. SAWA 2020.*

To minimize potential effects to gnatcatcher, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of the construction activities. Work during nesting season will mainly be pipeline removal and, abandon and grout in place. Based on 2020 territories, there are 5 CAGN territories within a 500 foot buffer of the pipeline planned for removal (**Figure 11**). Portable sound walls will be required for work occurring between

February 15<sup>th</sup> to September 15<sup>th</sup> of any year, and noise levels will be monitored during that time period. In addition, the Corps has committed to perform or require offsite noise mitigation for every acre of coastal sage scrub habitat that is exposed to noise levels exceeding 2 consecutive 8 hour work days during each nesting season that the impact occurs at a 1 to 1 ratio (Environmental Commitment #5 in 1.3.4.1). And as previously mentioned, onsite restoration of the temporary construction easement as well as offsite restoration to address temporal loss of CSS (at a 1:1 ratio) would also occur. All temporary impact areas will be restored with native vegetation (coastal sage scrub seed mix; see **Appendix A**) and monitored and managed (weeded) for at least 8 years after construction to reduce the potential for infestation of invasive plant species. Dust control measures will be implemented during the construction phase to reduce excessive dust emissions (Environmental Commitment #8 in 1.3.4.1). A full list of avoidance, minimization, restoration and offsetting measures are provided in section 1.3.4.1.

### **Least Bell's Vireo and Critical Habitat**

**Critical Habitat:** A portion of the Proposed Project would occur within Least Bell's vireo designated critical habitat. However, no riparian vegetation would be affected. Temporary impacts within designated critical habitat would occur on disturbed upland vegetation from moving and staging heavy equipment. A total of 3.25 acres of designated critical habitat would be temporarily impacted by the Proposed Project. No permanent impacts would occur. None of this area provides PBFs for vireo which includes riparian woodland vegetation the generally contains both canopy and shrub layers and includes some associated upland habitats. These PBFs are required for least Bell's vireo occupation as the area is mainly upland communities (i.e. ruderal, grassland and disturbed coastal sage scrub) that do not provide habitat for least Bell's vireo. Commitments presented in section 1.3.4.1 lists measures to reduce and avoid impacts to designated critical habitat therefore, the proposed action May Affect but is not Likely to Adversely Affect least Bell's vireo designated critical habitat.

**Species:** Based on preliminary 2021 data provided by SAWA, this species is currently known to maintain 5 territories within the project area, outside of the designated critical habitat boundary (**Figure 10**). In 2020, there were only 4 territories within the project area. Because there are more individuals captured in 2021 data, this was used to account for impacts. Therefore, based on 2021 data, two of these territories are directly within the TCE, and 5 territories are within the 500-foot buffer zone and could be indirectly affected by noise or other disturbance. A total of 719 territories were documented by SAWA in 2020 within the Prado Basin (SAWA 2020). Based on the type of activity, equipment and estimated noise levels (with sound reducing measures in place), it is assumed that the direct (vegetation removal) and most of the indirect (noise and disturbance) effects of the proposed action would occur within a 500'-wide buffer surrounding each alignment. An excavator produces noise on average at about 87 decibels. With sound walls in place and considering natural attenuation over distance, it is anticipated that sound levels would approach ambient conditions outside of the 500' buffer area. Movement of LVBI would not be constricted by the proposed activity and they may use more suitable habitat north/northeast of Prado Dam. While vireo may still be able to successfully forage and nest within the vicinity and possibly within the 500' buffer zone, this analysis assumes an adverse effect to previously and currently established territories within this area.

Dust can also visually impair vireos and degrade air quality and human presence can cause vireos to abandon territories and nests. Increased competition for nest sites and other resources could occur until construction is completed and onsite and offsite habitat restoration occurs.

Construction will continue past March 1<sup>st</sup> into LBVI nesting season. However, the majority of the work that would continue through April would be in areas with less suitable habitat for LBVI.

The proposed action would result in the potential temporary displacement of 2 LBVI territories within the TCE and potential indirect disturbance to 5 LBVI territories in adjacent areas (**Table 5**). Therefore, the proposed action May Affect LBVI.

**Table 5. Least Bell’s Vireo (LBVI) Impacts Per Alignment Option**

LBV Territories in Footprint	LBV Territories in 500' Buffer
2	5

*\* Territory numbers were conservatively estimated using survey data from SAWA 2021.*

All temporary impact areas will be restored with native vegetation (coastal sage scrub seed mix; see Appendix A) and monitored and managed (weeded) for at least 8 years after construction to reduce the potential for infestation on invasive. To minimize potential effects to least Bell’s vireo, vegetation clearing would occur outside of the nesting season, and sensitive species monitoring would occur through the duration of the construction activities. Work will continue into nesting season although, no LBVI territories were found in 2021, 2020 or 2019 near the sections of pipe that would be removed during nesting season. There was a territory within 110 feet of the gas-line removal in 2018. To minimize any potential impact to LBVI that were not detected, portable sound walls will be placed around work equipment when work continues into nesting season. Noise monitoring will take place during nesting season. Dust control measures will be implemented during the construction phase to reduce excessive dust emissions (Environmental Commitment #8 in 1.3.4.1). Measures to minimize and avoid impacts to this species include monitoring, removing vegetation outside of nesting season, habitat restoration, noise monitoring, sound wall around equipment during nesting season, controlling of excess dust, and continued monitoring during construction for special status species (see 1.3.4.1).

**Operations and Maintenance**

No additional effects to least Bell’s vireo would occur during routine O&M activities that take place on or from existing established maintenance roads or other permanent features.

**4.2. Cumulative Effects**

Over past decades this region has seen increased developments, including substantial commercial, residential, and transportation expansions, which has resulted in substantial losses of habitat and produced extensive habitat fragmentation. In the immediate area, there are four planned or ongoing

projects that were assessed for the potential to cause cumulative effects; the Santa Ana Trail Project, and the State Route 71/ State Route 91 Interchange Improvement Project.

**State Route 71/ State Route 91 Interchange Improvement Project (Planned)**

The Interchange Project would improve the SR-71/SR-91 interchange by constructing a new direct flyover connector from EB SR-91 to NB SR-71. The project also includes bridge widening and restriping of SR-91 EB lanes, modification or construction of new drainage facilities, grading of hillside slopes, construction of retaining walls, SR-71 realignment and widening, and modification of access driveways. A portion of the State Route 71 freeway would have two bridge piers on either side of the Prado Dam channelized outlet. This work is further southwest of the action area towards the end of the channelized outlet. Installation of the bridge footing will not result in any vegetation removal. The work is not anticipated to occur within the same year as the proposed project. Caltrans plans to begin construction in July 2022. Both this project and the proposed action have added avoidance and minimization measures that reduce impacts and would not result in substantial negative cumulative effects.

**The Santa Ana Trail Project (Planned)**

The Santa Ana Trail project would go through a portion of the proposed project area and add a biking/walking path and equestrian trail. Construction is anticipated to begin in 2023. The path would follow a well-defined access road across the project area (southeast to northwest) and then use the top of the channelized outlet to come back down (northwest to southwest) and out of the project area. The proposed project and the Santa Ana Trail project would not occur within the same year and added minimization measures would reduce impacts to listed species. No substantial negative cumulative impacts are anticipated.

## Chapter 5. Literature Cited

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Pike, J. 2020. (SAWA) Least Bell's Vireo and Southwestern Willow Flycatcher in the Prado Basin of the Santa Ana Water River Watershed CA, Orange County Water District. 2020

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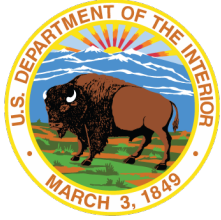
USFWS. 1994. Designation of Critical Habitat for Least Bell's Vireo. Federal Register 50 CFR 17. 02 February, 1994.

## Appendix A Seed Mix for Hydroseeding

This coastal sage scrub seed mix was prepared by a biologist based on existing coastal sage scrub composition and was used to seed the wildlife ramp that goes over the auxiliary dike of Prado Dam. This is a potential list but substitutions may be made based on review and recommendations by Corps biologists and consultants.

Common Name	Botanical Name	Pounds per Acre	Plant Type
California sagebrush	<i>Artemisia californicus</i>	2	Perennial
Black sage	<i>Salvia mellifera</i>	3	Perennial
White sage	<i>Salvia apiana</i>	2	Perennial
Coyote brush	<i>Baccharis pilularis</i>	2	Perennial
California bush sunflower	<i>Encelia californica</i>	4	Perennial
California buckwheat	<i>Eriogonum fasciculatum</i>	8	Perennial
Coast goldenbush	<i>Isocoma menziesii</i>	3	Perennial
Deerweed	<i>Lotus scoparius</i>	5	Bi-annual
Arroyo lupine	<i>Lupinus succulentus</i>	1	Annual
California poppy	<i>Eschscholtzia californica</i>	1	Perennial herb/Annual
Plantain	<i>Plantago ovata</i>	5	Annual
Purple needle grass	<i>Nassella pulchra</i>	1.5	Perennial grass
Foothill needle grass	<i>Nassella lepida</i>	1.5	Perennial grass
Nodding needle grass	<i>Nassella cernua</i>	1.5	Perennial grass
Foxtail fescue	<i>Vulpia (Festuca)megalura</i>	1	Annual
Total pounds per acre		41.5	

**Appendix F: Biological Opinion (BO)**



## United States Department of the Interior

### U.S. FISH AND WILDLIFE SERVICE

Ecological Services  
Carlsbad Fish and Wildlife Office  
2177 Salk Avenue, Suite 250  
Carlsbad, California 92008



In Reply Refer to:  
FWS-WRIV-08B0408-21F1276

September 17, 2021  
*Sent Electronically*

Eduardo T. De Mesa  
U.S. Army Corps of Engineers – Los Angeles District  
915 Wilshire Boulevard, Suite 930  
Los Angeles, California 90017

Attention: Kathlyn Osagie, Biologist

Subject: Formal Section 7 Consultation for the Prado Dam Gas Line Relocation, Riverside County, California

Dear Eduardo De Mesa:

This document transmits the U.S Fish and Wildlife Service's (Service) biological opinion on the Prado Dam Gas Line Relocation (Project) in Riverside County, California. On June 24, 2021, we received a letter via email from your agency, the U.S. Army Corps of Engineers (Corps) requesting initiation of Section 7 consultation under the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). This request is regarding the potential effects of the Project on the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher), and the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo) and its critical habitat. The Southern California Gas Company (SoCalGas) is the non-Federal Project applicant.

In its biological assessment of the Project, the Corps determined that the proposed action is not likely to adversely affect designated least Bell's vireo critical habitat. The proposed Project footprint would temporarily affect 3.25 acres of designated vireo critical habitat; however, this designated critical habitat does not contain the physical and biological features (PBFs) to support vireo. The critical habitat within the Project footprint consists of upland habitat along the edge of more suitable vireo critical habitat within Prado Basin, which will not be impacted. We therefore concur with the Corps' determination that the proposed Project is not likely to adversely affect designated vireo critical habitat and it will not be further discussed within this biological opinion.

The analyses and conclusions provided in this biological opinion are based on information provided in your letter requesting initiation of consultation, the Biological Assessment for the Prado Dam Gas-line Removal Project, and email correspondence between the Corps and the Service between May 11, 2021 and August 23, 2021.



## **CONSULTATION HISTORY**

The Service and the Corps began informal consultation regarding exploratory drilling for the proposed Project beginning on January 19, 2021. The Service provided a letter of concurrence via email on January 27, 2021. Further exploratory drilling was determined to be needed and the Service was contacted on April 29, 2021 via email. We issued an additional letter of concurrence to the Corps via email on June 1, 2021. On May 11, 2021, the Corps provided preliminary information on the proposed Project and on May 18, 2021, the Service requested a finalized Project footprint, instead of the three alternatives that were proposed. The consultation began when the Corps requested initiation of formal consultation on June 24, 2021, with a biological assessment which included the finalized Project footprint. We submitted a request for more information via email on July 9, 2021 and received responses from the Corps via email on July 14 and 21, 2021. The Service submitted final questions pertaining to the project description on August 16, 2021, and received responses, along with a sound map of measured ambient noise on August 23, 2021.

## **BIOLOGICAL OPINION**

### **DESCRIPTION OF THE PROPOSED ACTION**

The partial removal and relocation of an existing SoCalGas line is required to accommodate the future modifications of the Prado Dam spillway. The raising of the spillway and other dam safety modifications are components of the much larger Santa Ana River Mainstem Flood Control Project (SARP). The Project would consist of two phases: 1) installing a new gas pipeline in the new alignment, and 2) removing or grouting in place the old gas-line.

#### **Pipeline Relocation**

The new pipeline would be a 30-inch high-pressure pipeline. The new alignment would run from an existing (unaffected) gas line segment located northeast of the spillway, roughly follow the State Route (SR) 91 highway, then turn northwest towards the area between the Prado Dam Embankment and the SR-91 highway, where it would tie into the existing gas-line near SR-71, as shown on Figure 1. Sections of pipe would be installed by digging an approximately 6-foot-wide and 7-foot-deep open trench for a total of 0.91 miles. The excavator used for the trench segments would require a 75-foot-wide workspace to dig, stockpile soil, and install the new pipeline. The excavated soil would be stockpiled within the 75-foot Temporary Construction Easement (TCE) and used to cover the pipeline. Any remaining soil would either be used to fill in areas where pipeline is removed permanently or spread and graded within the TCE.

Pipeline installation would also include crossing under a 0.25-mile-long section of the Prado Dam outlet channel, which would be accomplished using horizontal directional drilling (HDD). HDD requires a string layout area, where the pipe would be fabricated before going underground. Vegetation removal would occur within the open trench segments but is not anticipated for the HDD segment, other than at the boring entry and exit. Boring would begin on the southeast side of the outlet channel and exit on the northwest side of the channel, close to its connection with the existing pipeline near SR-71 (Figure 1). HDD involves boring a hole using a

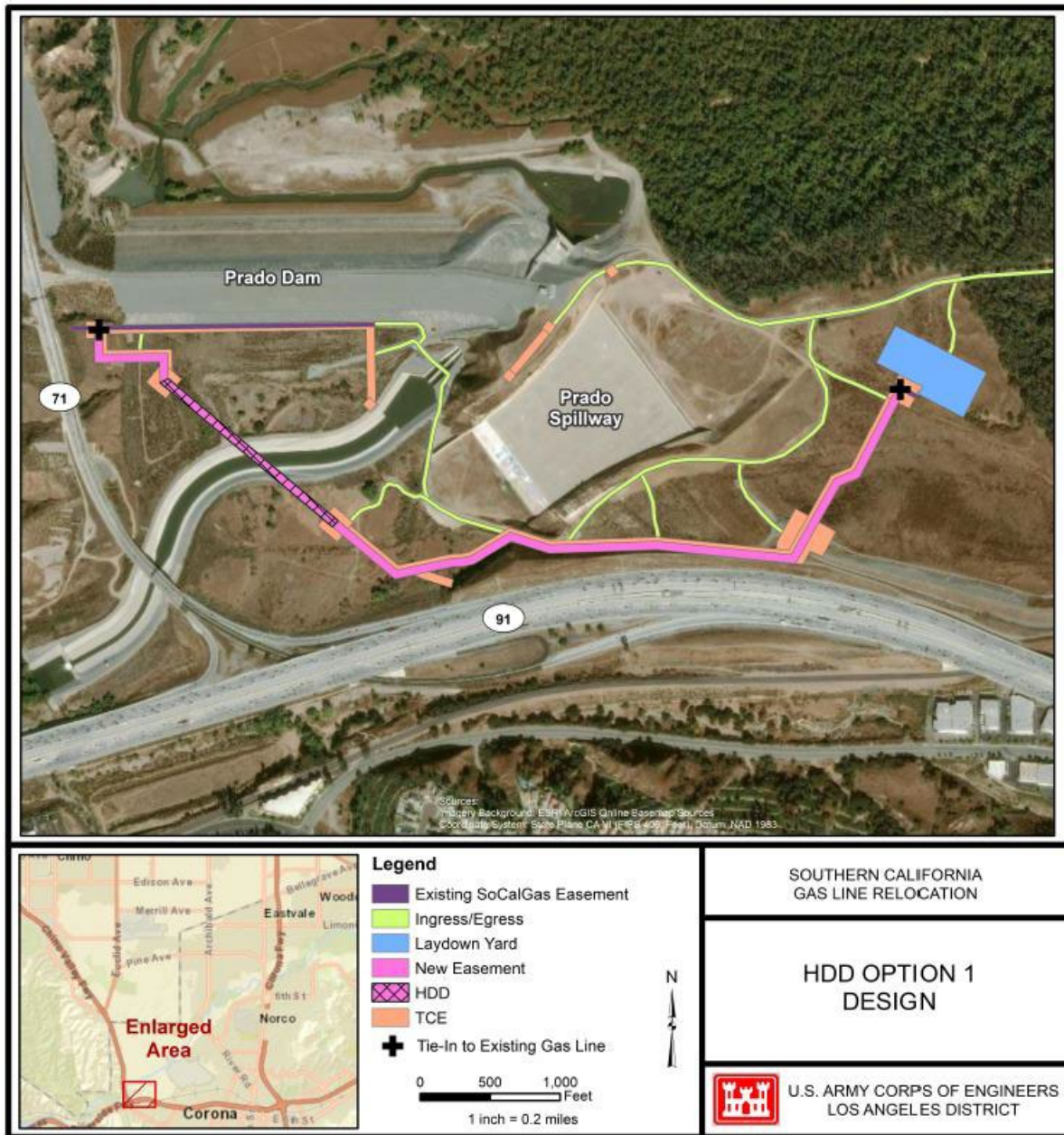
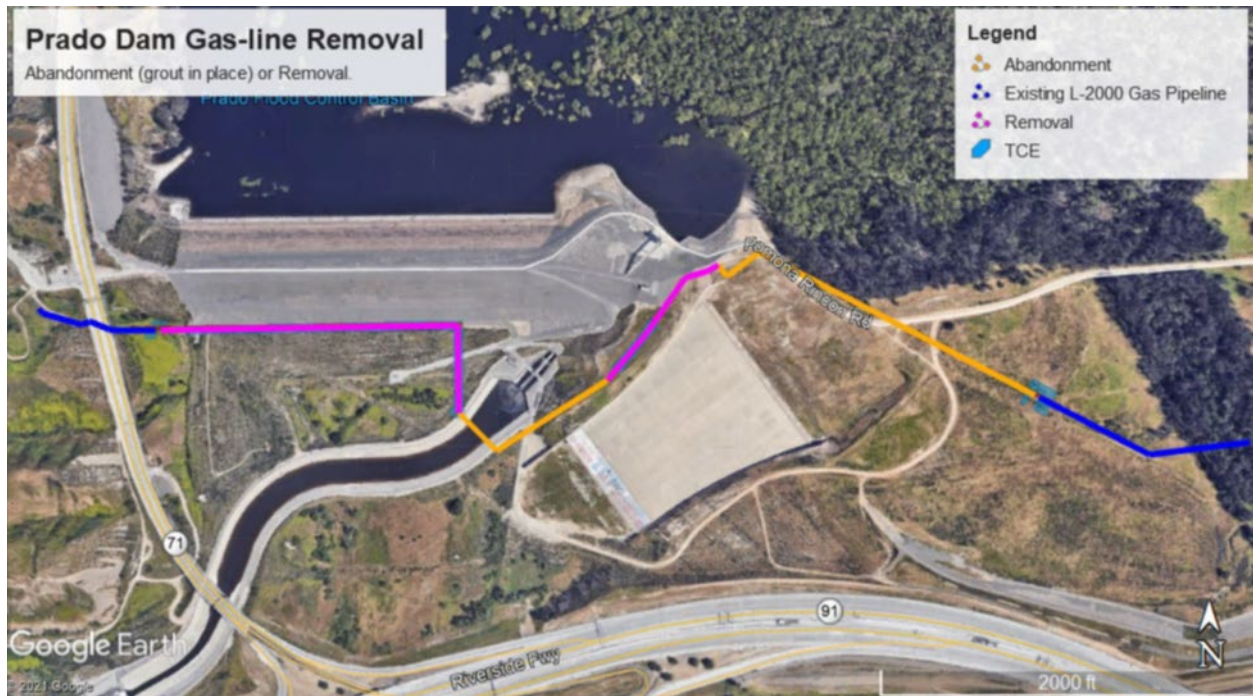


Figure 1. Proposed new alignment of the SoCalGas pipeline.



**Figure 2.** Proposed grout-in-place and gas line removal.

drill to tunnel underneath the outlet at a 15-degree angle. The truck would require a workspace at the entrance and exit.

The work would be done from 7am to 5pm except during HDD pullback and gas-line tie-in. HDD pullback, which is when the pipe would be pulled through the HDD tunnel must be completed as quickly as possible, so the tunnel does not collapse. This work would take between 24 and 48 hours to complete. During the gas-line tie-in, which is when the new gas line is being reconnected with the existing pipe, the gas must be shut off. Tie-in would therefore be carried out as quickly as possible and is expected to take a minimum of 24 hours to a maximum of 48 hours to complete.

Nighttime work would require use of lighting to illuminate work areas including access roads and ensure worker safety. For both HDD pullback and tie-in, multiple mobile light towers will be required to maintain a safe work environment along with two cranes, two reach lifts, an x-ray van, and multiple company trucks. Lights will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement.

### **Grout-in-Place Pipeline Abandonment and Removal**

Portions of the pipeline that are abandoned in place would be filled with grout. Partial abandonment rather than full removal of the entire pipeline is proposed in order to reduce excavations in the vicinity of the outlet channel and prevent damage to the outlet channel lining. Grout would be designed to compensate for potential shrinkage and installation would

incorporate procedures to ensure the complete filling of the pipe. The pipe would be video-inspected and cleaned per Federal Emergency Management Agency Technical Manual 484 guidance prior to grouting. If the pipe is deteriorated or damaged and cannot be safely grouted, a new abandonment approach would be developed. Removal is planned for the existing pipeline at the toe of the dam and sections near but outside of the channelized outlet (Figure 2). Grout in-place is planned for the portion that is north of the spillway and the portion that extends underneath the channelized outlet. Sections of pipeline to be removed would be located using potholing and tested for asbestos before removal. No asbestos is anticipated to be found based on the type of pipe that was installed, but in the rare event that a pipe tests positive for asbestos, remediation would occur. Removed soil removed would be backfilled.

### **Staging, Borrow Sites, TCE and Access Routes**

A 3.77-acre equipment staging area is planned on an open area northeast of the spillway (see blue polygon titled laydown yard in Figure 1). Existing roads will be used to drive equipment to the staging area. A workspace is required for the HDD drill entrance and exit. This project does not require a borrow site. No new roads will be created, and crew members will use existing maintenance roads for access.

### **Construction Schedule and Phasing**

Construction of the Project is currently scheduled to begin in October of 2021 and end by April 2022. The gas-line relocation includes pipeline installation via trenching, HDD, and vegetation removal (which will occur between September 15th through February 15th). After the new gas-line has been installed, the gas-line removal and grout in place will begin and conclude in April 2022.

### **Anticipated Routine Maintenance**

Pipeline maintenance operations are expected to be minor and infrequent. SoCalGas performs typical leak detection inspections via either drone or truck, depending on access. Inspections occur about every 5 to 7 years. The method of inspection typically does not cause any disturbance above ground as the pipe is inspected via an internal tool. Per California Fire Marshal regulation, SoCalGas is required to have quick access to their pipeline in case of emergency. For these kinds of emergencies, existing access is sufficient.

### **Conservation Measures**

The following conservation measures (CM) were designed to avoid, minimize, and offset impacts to federally listed species.

- CM 1. All vegetation removal will occur between September 15 and February 15 to avoid impacts to gnatcatcher, vireo, and other nesting birds.
- CM 2. A biological monitor approved by the Corps' Environmental Resources Branch will monitor construction activities to ensure compliance with all environmental

commitments. The biological monitor will survey the proposed Project area and adjacent habitats throughout construction and restoration activities for the presence of special status species and will confirm that conservation measures are sufficient to avoid or minimize impacts to these species, or recommend additional measures as warranted.

- CM 3. Prior to construction activities, the biological monitor will conduct pre-construction environmental training for all construction crew members. The training will focus on required avoidance/minimization measures and conditions of regulatory agency permits and approvals. The training will also include a summary of sensitive species and habitats potentially present within and adjacent to the proposed Project area.
- CM 4. Portable sound walls will be required for work occurring between February 15th to August 15th of any year.
- CM 5. The biological monitor will be required to monitor noise regularly during the nesting season (February 15 – August 15). Ambient noise levels were recorded in January and August 2021 (Appendix A). Noise monitoring will occur to ensure that 1) noise does not exceed 60 A-weighted decibels (dBA) of equivalent continuous sound level (Leq) hourly in areas at or below 60 dBA or another agreed upon limit with the Service, or 2) where pre-construction ambient noise is greater than 60 dBA, noise does not exceed 5 dBA Leq hourly above ambient conditions or another agreed upon limit with the Service, in occupied vireo or gnatcatcher habitat adjacent to the TCE during the nesting season.
- a. If construction noise levels within occupied adjacent habitat cannot be reduced to 60 dBA Leq hourly (in areas at or below 60 dBA), or 5 dBA Leq hourly above ambient (in areas above 60 dBA), or another agreed upon limit with the Service, in adjacent occupied vireo or gnatcatcher habitat during nesting season, the Corps will require SoCalGas to offset impacts at a 1:1 ratio per any period during the breeding season affected by such noise levels. This 1:1 ratio will be based on the acreage of occupied coastal sage scrub or riparian habitat outside the TCE subject to noise levels above 60 dBA Leq hourly (in areas at or below 60 dBA), or 5 dBA Leq hourly above ambient (in areas above 60 dBA), or another agreed upon limit with the Service during the nesting season, per the number of breeding seasons affected. The area affected will be determined by the periodic Project noise monitoring. If necessary, the Corps will identify or require SoCalGas to identify restoration areas for offsetting noise impacts in coordination with the Service and will maintain (continue weeding) those areas for a period of 5 years. Offsetting measures could include the use of mitigation bank credits or direct habitat restoration.
- CM 6. Upon construction completion, the Corps will require SoCalGas to immediately revegetate each acre that is temporarily impacted and/or made bare by project

activities. The hydroseed mix used to restore the disturbed areas will be approved by the Corps and be made of native seed consistent with the native vegetation community. Areas that overlap with the Prado Dam spillway project that will be disturbed may be seeded with an erosion control mix approved by Corps biologists. Non-overlap restoration areas must be monitored and managed (weeded) for at least 8 years after construction to reduce the potential for weed infestation. Depending on the time of year the hydroseed is placed, temporary supplemental watering may be needed. Watering need and frequency for hydroseeded areas will be approved by the Corps to ensure successful germination and establishment of native vegetation. Any areas that overlap with the Prado Dam Spillway project (if or when that project is approved and funded) will transfer over to Corps for long-term monitoring after completion of Spillway construction (Figure 3).

- CM 7. In addition to revegetating temporary impact areas, to address temporal impacts the Corps will perform or require SoCalGas to perform offsite mitigation at a 1:1 ratio for all direct impacts to native habitat impacted by the proposed project. This would result in an estimated total of 11.5 acres of habitat restoration, to be verified in stages during construction and by the final construction report. Offsite restoration area(s) and or mitigation bank credits will be identified in coordination with the Service prior to start of construction, or the date by which such offsite restoration area(s) will be identified will be agreed upon by the Service and the Corps/SoCalGas prior to the start of construction. Offsite restoration sites will be actively managed (weeded, planted, irrigated as needed) for a period of 5 years or until success criteria are met in work areas that don't overlap with the potential future Prado Dam Spillway Modification Project (6.2 acres). In work areas that do overlap with the potential future Prado Dam Spillway Modification Project TCE, the Prado Dam Spillway Modification Project will perform the required offsite restoration for direct impacts to that habitat. If the spillway project is not approved for construction within 1 year of the relocation (or if the TCE changes and overlap is reduced), then the Corps will conduct or require 1:1 of offsite restoration for the gas line relocation Project.
- a. Restoration activities will be initiated immediately following the completion of the construction, but outside the gnatcatcher and vireo nesting season.
  - b. Success criteria will include a minimum of 30 percent native plant cover with less than 10 percent invasive plant cover.
  - c. A quantified monitoring protocol will be established that documents the maintenance and status of native and non-native cover in the restored area, in order to empirically show success of native habitat establishment. This will include documenting both the structure and composition of the restored plant community, and documenting wildlife presence in the restored habitat.

- CM 8. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the TCE, including designated staging areas or routes of travel. The construction area(s) will be the minimal area necessary to complete the proposed Project and will be specified in the construction plans. Highly visible barriers (such as orange construction fencing or sound walls) will be installed around all riparian and coastal sage scrub habitats adjacent to the TCE to designate limits of construction activities. These barriers will be maintained until the completion of all construction activities.
- CM 9. A storm water pollution prevention plan (SWPPP) and soil erosion and sediment plan will be developed prior to construction to minimize erosion and identify measures to eliminate or control pollution sources onsite during and following the construction phase. The SWPPP will include specific Best Management Practices (BMPs) needed during and after Project construction to minimize erosion, identify specific pollution prevention measures that will eliminate or control potential point and non-point pollution sources onsite, and avoid causing or contributing to any water quality standard exceedances.
- CM 10. Dust control measures will be implemented during the construction phase to reduce excessive dust emissions. Methods for reducing dust emissions may include wetting work areas, such as dirt access roads and sediment stockpiles, on a regular basis, as well as covering truck beds carrying material.
- CM 11. Best management practices will be implemented to reduce impacts to native habitats, including the following:
- a. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur in developed or designated non-sensitive upland areas. These areas will implement BMPs to prevent runoff carrying toxic substances from entering the Santa Ana River and associated drainages. If a spill occurs outside of a designated area, the cleanup will be immediate and documented.
  - b. Fire suppression equipment including shovels, water, and extinguishers will be available onsite during the fire season (as determined by Riverside County Fire Department) and when activities may produce sparks.
  - c. Construction equipment will be cleaned of mud or other debris prior to mobilizing and before leaving the site to reduce the potential spread of invasive plants and/or seeds.
- CM 12. A spill prevention, control, and countermeasure plan or soil prevention and response plan, as applicable, will be developed to prescribe BMPs to prevent hazardous material releases and ensure cleanup of any hazardous material releases.

- CM 13. Most work will occur during daylight hours (7am to 5pm) except during HDD pullback (pulling the pipe through the HDD tunnel) and tie-in (reconnecting the gas-line). Lights required for nighttime work will be directed inward toward the TCE to the extent possible and not directed into adjacent habitat areas to reduce impacts to wildlife movement.
  
- CM14. Open trench segments will have the gas line quickly placed and buried. If the gas line is unable to be backfilled quickly, then protection measures will be put in place to protect wildlife and workers (e.g. barriers such as plates, netting, boards, and ramps every 50 feet in open trenches to help wildlife exit).



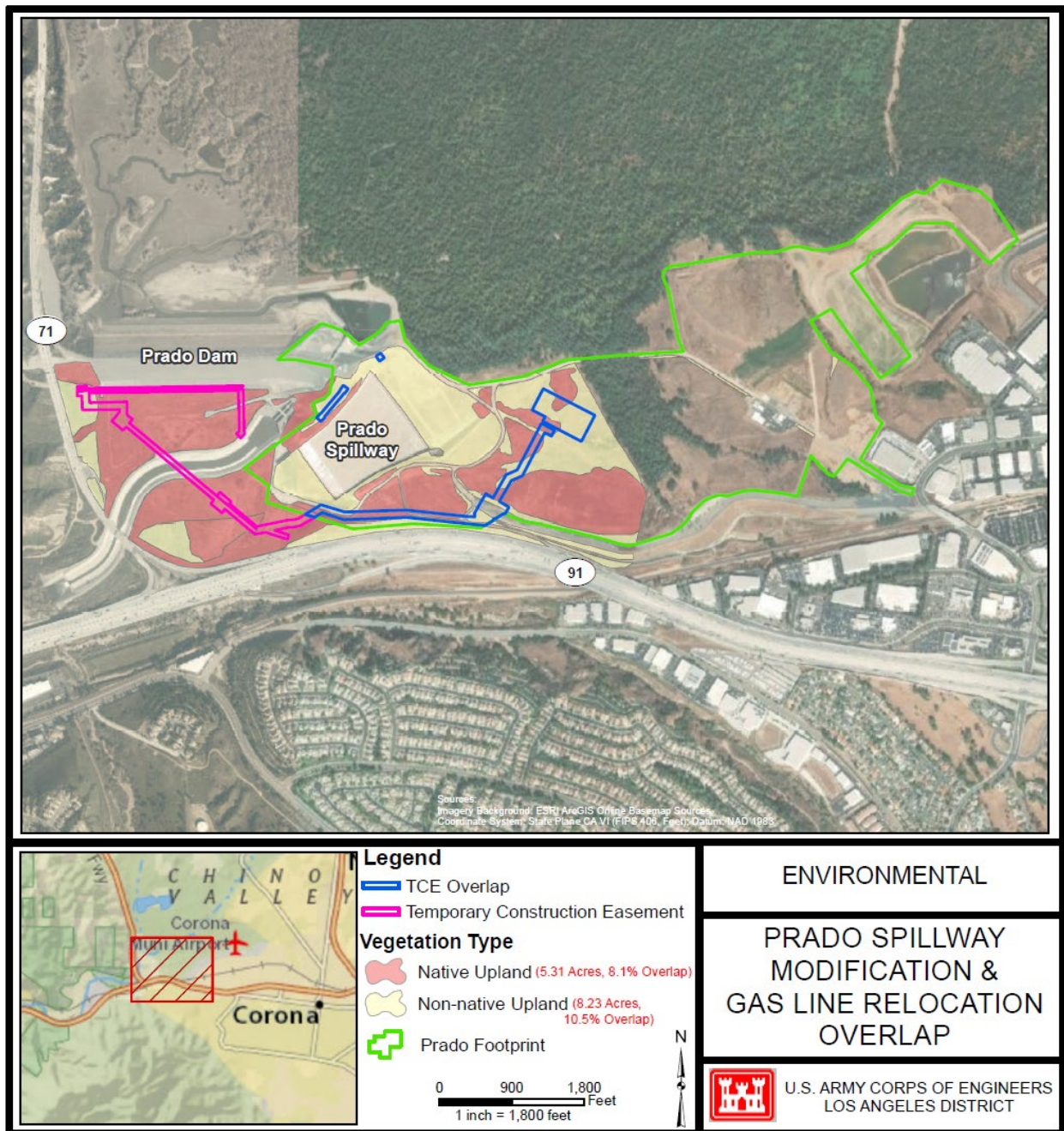


Figure 3. Overlay of gas line Project footprint (purple) and Prado Dam spillway footprint (green).

## **ANALYTICAL FRAMEWORK FOR THE SECTION 7(A)(2) DETERMINATIONS**

### **Jeopardy Determination**

Section 7(a)(2) of the Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species” (50 CFR 402.02).

The jeopardy analysis in this biological opinion relies on four components: (1) the Status of the Species, which describes the range-wide conditions of the species, the factors responsible for that condition, and their survival and recovery needs; (2) the Environmental Baseline, which analyses the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the Effects of the Action, which are all consequences to listed species caused by the proposed action that are reasonably certain to occur; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities in the action area on the species.

For the section 7(a)(2) determination regarding jeopardizing the continued existence of the species, the Service begins by evaluating the effects of the proposed Federal action and the cumulative effects. The Service then examines those effects against the current status of the species to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the species in the wild.

## **STATUS OF THE SPECIES**

### **Least Bell’s Vireo**

The following section summarizes information about the federally endangered least Bell’s vireo pertinent to its legal status and biology as it pertains to the Project. For more detailed information on the vireo’s biology, ecology, range wide status, threats, and conservation needs, please refer to the draft recovery plan (Service 1998) and 5-year review (Service 2006). Additional information is also available in the final rule designating critical habitat for vireo (59 FR 4845). These documents are available on the [least Bell’s vireo species’ profile](#).

### ***Numbers***

The vireo was listed as endangered on May 2, 1986 (51 FR 16474), in response to a dramatic decline in population and widespread loss of riparian habitat. By 2006, we recommended that the vireo be downlisted from endangered status to threatened status in our 5-year review because of a ten-fold increase in population size since its listing. Numbers of documented vireo have continued to climb, and 3,413 territories were recorded range-wide in 2018 (Kus et al. 2019).<sup>1</sup>

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<sup>1</sup> More recent range-wide data is not yet available.

Within the Santa Ana River watershed, the number of vireo territories observed has increased to 2,293 in 2020 (Zembal *et al.* 2020). It is important to keep in mind that the numbers reported here are for territories observed and reported; they are not exhaustive and do not necessarily represent pairs. The recorded territories are the minimum number of territorial males observed and reported within an area. It is also important to note that the survey effort, both within the Santa Ana River watershed and range-wide, has varied widely from year to year and therefore numbers of territories presented may underestimate true abundance. Year-to-year comparisons should be made with caution.

### ***Reproduction***

The vireo is an obligate riparian species during the breeding season, occupying a number of riparian habitat types, including cottonwood-willow woodlands/forests, oak woodlands, and mulefat scrub. However, vegetation structure is an important determinant of vireo site use and they prefer a diverse array of early successional riparian vegetation. Occupied breeding habitat generally includes dense shrub cover within 3 to 6 feet from the ground for nesting and a structurally diverse canopy for foraging (Service 1998). Plant species composition does not appear as important a determinant in nesting site selection as habitat structure. As riparian vegetation matures, the tall stands tend to shade out the shrub layer, making the sites less suitable for vireo nesting. In addition, vireo nests tend to occur in openings and along the riparian edge, where exposure to sunlight allows the development of shrubs (Service 1998).

Vireo generally begin to arrive from their wintering range in southern Baja California and establish breeding territories by mid to late March, departing from their breeding grounds by the third week of September (Garrett and Dunn 1981; Salata 1983a, 1983b; Hays 1989; Pike and Hays 1992). Data collected for color-banded birds indicate that site fidelity is high among adults, with many birds not only returning to the same territory, but also placing nests in the same shrub used the previous year (Salata 1983b).

Although the vireo occupies home ranges that typically vary in size from 0.5 to 4.5 acres (RECON 1988), a few may be as large as 7.5 acres (Service 1998). In general, it appears likely that areas that contain relatively high proportions of degraded habitat have lower reproductive success than areas that contain high quality riparian woodland (Jones 1985; RECON 1988; Pike and Hays 1992).

### ***Distribution***

The number of locations with breeding vireo has increased throughout southern California since listing, and there has been a slight shift northward in the subspecies overall distribution, but it remains restricted to the southern portion of its historic range (Service 2006). Vireo historically occupied willow riparian habitats from Tehama County in northern California, southward to northwestern Baja California, Mexico, and as far east as Owens Valley, Death Valley, and the Mojave River (Grinnell and Miller 1944; Service 1998). Greater than 99 percent of remaining vireo still nest in southern California, south of the Tehachapi Mountains (Service 2006).

Widespread habitat losses have fragmented most remaining populations into small, disjunct, and widely dispersed subpopulations.

### ***Recovery***

The overall positive trend for vireo since its listing is primarily due to efforts to reduce threats such as wholesale loss and degradation of riparian habitat and brown-headed cowbird (*Molothrus ater*) parasitism. To be considered for downlisting, the Draft Recovery Plan identifies 11 sites that must be protected and managed, with stable or increasing vireo populations/metapopulations consisting of several hundred or more breeding pairs. The Santa Ana River and Camp Pendleton/Santa Margarita River populations have met this criterion but most of the other locations have not. As numbers increase, the goal is that these “source populations” will expand into the northern portion of its current range, eventually recolonizing riparian woodlands of the California Central Valley.

### **Coastal California Gnatcatcher**

The following section summarizes information about the federally endangered coastal California gnatcatcher pertinent to its legal status and biology as it pertains to the Project. For more detailed information on the gnatcatcher’s biology, ecology, range-wide status, threats, and conservation needs, please refer to the 5-year review (Service 2010a). Additional information is also available in the revised final rule designating critical habitat for gnatcatcher (72 FR 72010). These documents are available on [the coastal California gnatcatcher's species profile](#).

### ***Numbers***

The Service listed the gnatcatcher as threatened on March 30, 1993 (58 FR 16742). Numbers were reported as declining in the early 1980s, coupled with a continued reduction in the amount of habitat (Atwood 1980; Garrett and Dunn 1981; Unitt 1984). At the time of listing in 1993, we estimated about 2,562 pairs of gnatcatchers remained in the United States, and about 2,800 pairs remained in Baja California (Service 1993). However, these estimates were not statistically valid because they were conducted using methods not supported by probability theory. Additionally, gnatcatcher population sizes are known to fluctuate from year to year (Atwood and Bontrager 2001), which further complicates any trend assessment. Based on results from a Winchell and Doherty (2008) study that was restricted to Orange and San Diego counties, our conclusion is there are likely more gnatcatchers in the U.S. portion of the range than was suggested by earlier estimates, but we still do not have a clear number or have indication of a range-wide trend.

### ***Reproduction***

Gnatcatchers are closely tied to coastal scrub for reproduction (Atwood 1993) but they may also occur in other nearby plant communities, especially during the non-breeding season. The home range size varies seasonally and geographically, with winter season home ranges being larger than breeding season ranges (Bontrager 1991) and inland populations having larger home ranges than coastal (Atwood and Bontrager 2001). They defend breeding territories ranging in size from 2 to 14 acres. The breeding season of the gnatcatcher generally extends from late February

through July, with the peak of nest initiations occurring from mid-March through mid-May. Nests are composed of grasses, bark strips, small leaves, spider webs, down, and other materials and are often located in California sagebrush (*Artemisia californica*) plants about 3 feet above the ground. Nests are constructed over a 4 to 10 day period. Clutch size averages four eggs. The incubation and nestling periods encompass about 14 and 16 days, respectively. Both sexes participate in all phases of the nesting cycle. Although the gnatcatcher may occasionally produce two broods in one nesting season, the frequency of this behavior is not known; however, the species is known to rapidly and repeatedly renest following the loss of eggs or juveniles to predators. Juveniles are dependent upon or remain closely associated with their parents for up to several months following departure from the nest and dispersal from their natal territory (Service 2010).

Dispersal of juveniles generally requires a corridor of native vegetation that provides certain foraging and sheltering requirements and that connects to larger patches of appropriate sage scrub vegetation (Soulé 1991). These dispersal corridors facilitate the exchange of genetic material and provide a path for recolonization of extirpated areas (Soulé 1991; Galvin 1998). Galvin (1998) concluded that, “natal dispersal [through corridors] is therefore an important aspect of the biology of [a] . . . nonmigratory, territorial bird . . . [such as] the California gnatcatcher.” The gnatcatcher generally disperses short distances through contiguous, undisturbed habitat, but juvenile gnatcatchers are capable of dispersing long distances (up to 14 miles) across fragmented and highly disturbed sage scrub habitat, such as that found along highway and utility corridors or remnant mosaics of habitat adjacent to developed lands (Bailey and Mock 1998; Famolaro and Newman 1998; Galvin 1998).

### ***Distribution***

Gnatcatchers occur in or near coastal scrub vegetation communities (Woods 1921; Atwood 1980). The coastal California gnatcatcher is the northernmost subspecies of California gnatcatcher (Atwood 1991), occurring along the Pacific coastal regions of southern California, from southern Ventura and San Bernardino Counties into northern Baja California, Mexico (Atwood 1991). The range of gnatcatcher follows that of sage scrub west of the mountains in this region. Within this overall range, the historical and current distribution of the gnatcatcher is naturally patchy. That is, it may be locally common in some areas of apparently suitable habitat and scarce or absent in others (Grinnell 1898; Grinnell and Miller 1944; Atwood 1980; Mellink and Rea 1994). This distribution has been further fragmented by anthropogenic changes to the habitat (Atwood 1993; Atwood and Bontrager 2001). Winchell and Doherty (2008) found the density of gnatcatchers was highest in high-quality habitat and decreased as habitat quality decreased.

Gnatcatchers are generally considered short-distance dispersers; individuals appear able to disperse and recolonize habitat fragments (Lovio 1996; Baily and Mock 1998), even within an urban matrix (Crooks et al. 2001; Surtain and Alberts 2008). This suggests the gnatcatcher is not especially sensitive to distance effects.

### ***Recovery***

Neither a recovery plan nor a recovery outline has been prepared for the gnatcatcher. However, the 2010 5-year review identified the gnatcatcher as having a moderate degree of threat, and a high potential for recovery (Service 2010). The subspecies' native habitat faces continuing conflict with urban development projects and other forms of economic activity.

In the 1993 listing rule, we stated that the "habitat and range of the gnatcatcher [had] been significantly reduced," noting that coastal sage scrub was "one of the most depleted habitat types in the United States" (Service 1993). Overall, we reported 58 to 61 percent of coastal sage scrub habitat had been lost in the three counties that supported about 99 percent of the U.S. gnatcatcher population (Service 1993). However, much of the subspecies' current range within the United States is now, or anticipated to be, covered by large, regional Habitat Conservation Plans (HCPs) permitted under section 10(a)(1)(B) of the Act and under the State of California's Natural Community Conservation Planning (NCCP) Act. These regional plans have made substantive contributions to the species' conservation (Service 2010).

An additional substantial threat to gnatcatcher is wildland fire (both natural and accidental), which can result in either a short-term temporary impact or lead to permanent habitat degradation (i.e. type conversion). Frequent fire can exacerbate habitat type conversion, generally consisting of the conversion of coastal scrub to grassland dominated by nonnative grasses and forbs, which can result in a positive feedback loop as these grassland habitats ignite more readily (Service 2010). Areas denuded by fire do not support gnatcatchers (Beyers and Peña 1995). As plants return to areas that have burned, gnatcatchers may return to use these areas as foraging habitat if adjacent unburned areas remain to provide nesting habitat (Wirtz et al. 1997). Burned areas with rapid plant re-growth may be suitable as both nesting and foraging habitat for the gnatcatcher within 3 years, but areas with slower re-growth take longer (e.g., 5 to 10 years) (Wirtz et al. 1997). This can ultimately lead to habitat fragmentation if the remaining patch sizes are small and distant enough from one another.

### **ENVIRONMENTAL BASELINE**

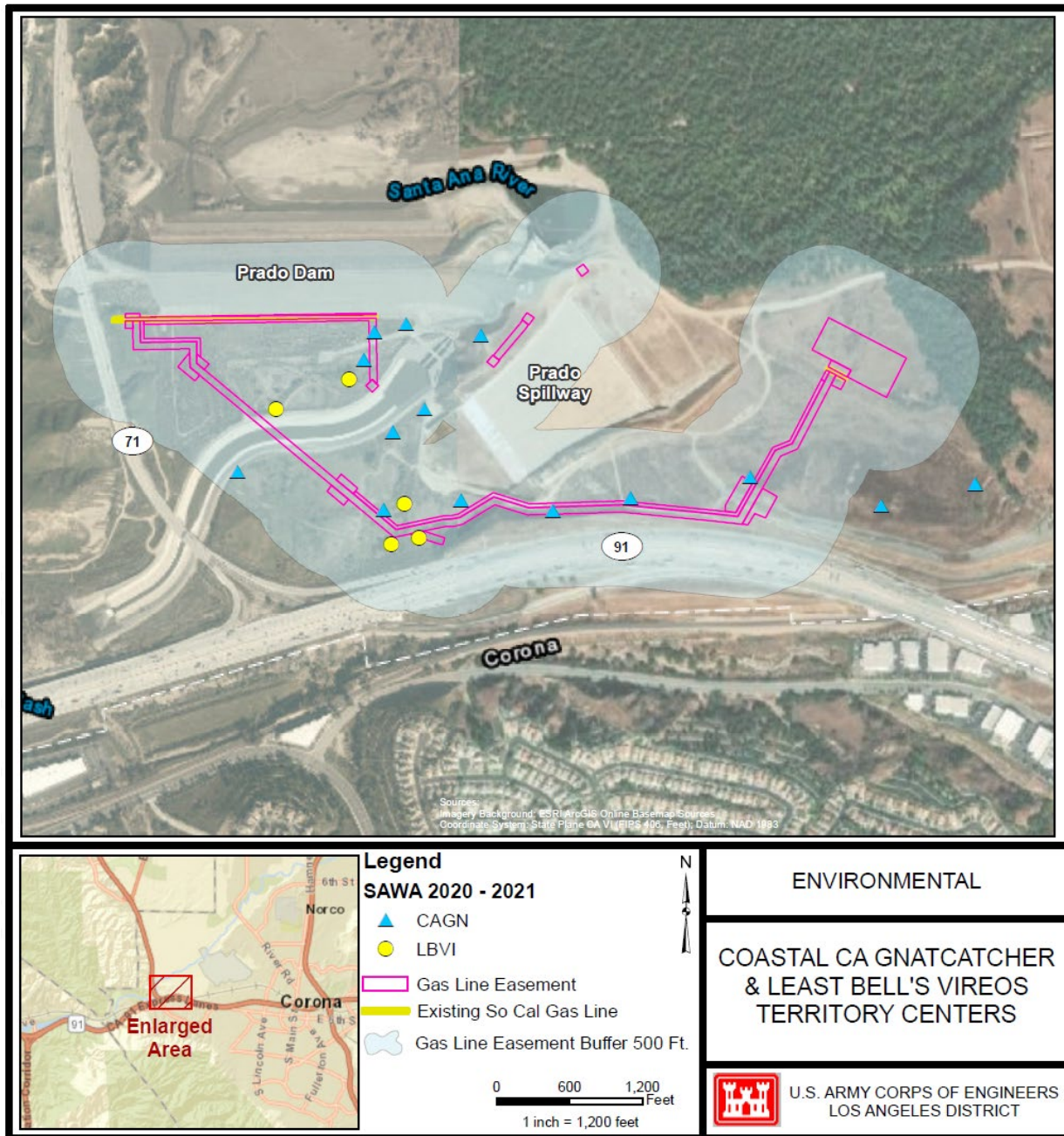
The regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR § 402.02).

**Action Area**

Regulations implementing the Act (50 CFR § 402.02) describe the action area as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area includes the entire Project footprint that contains Project actions including the TCE and staging area, and a 500-foot buffer around the TCE (Figures 1, 2, and 4). The action area was determined by accounting for direct impacts of Project actions within the TCE and potential indirect impacts from Project actions such as noise, vibrations, or dust that extend beyond the TCE.

Prado Dam was constructed by the U.S. Department of the Army in 1941, and is owned, operated, and maintained by the Corps' Los Angeles District. In the early 2000s, the main embankment of the dam was raised, and the dam outlet was moved as part of the SARP. The raising of the spillway is the final feature of the SARP to be designed and constructed. This Project is necessary to accommodate the new spillway construction and is within a portion of the spillway project area. The spillway construction is planned to begin after the gas line is relocated and is expected to continue for approximately four to five years.

The action area is bordered by the riparian forest of Prado Basin to the north and east, State SR-91 to the south, and SR-71 to the west. The majority of the action area has been repeatedly disturbed by Corps construction activities and O&M, with reseeding/restoration upon completion of components of the SARP. Vegetation surveys were conducted within the action area in 2020 (Figure 5). The vast majority of the action area was hydroseeded following previous SARP activities, with the exception of access roads. There are three broad vegetation types present within the action area: native upland (i.e. coastal sage scrub; approximately 11.5 acres), native riparian (approximately 1.1 acres), and non-native upland (primarily consisting of brome grasses and Russian thistle), along with developed areas (mainly roads and flood control infrastructure).



July 2021

Figure 4. Action area with vireo and gnatcatcher territories shown.



## **Least Bell's Vireo**

### ***Status of the Species in the Action Area***

Based on surveys performed in 2021, there are five vireo territories within the action area (Figure 4), two of which will be affected by vegetation clearing and grading activities within the TCE footprint. The remaining three territories may be subject to noise and other indirect impacts. The adjacent Prado Basin hosts an important vireo source population for vireo expansion beyond the immediate Project area. There are no permanent riparian impacts expected from this Project and approximately 1.1 acres of temporary riparian impacts.

### ***Recovery***

The Santa Ana River population of vireo meets the downlisting criteria specified in the 1998 Draft Recovery Plan; the population is currently protected and managed. Although the primary threats to the population are still present and show no signs of abating should the management cease, the number and distribution of vireo have been increasing since the Draft Recovery Plan was written. The number of observed vireo pairs within the Santa Ana River watershed was 1,199 in 2020 (Pike 2020; Zembal *et al.* 2020), satisfying the stated goal of several hundred or more breeding pairs in the Santa Ana River watershed. The vireo present within the action area are likely the offspring of the larger Prado Basin population.

## **Coastal California Gnatcatcher**

### ***Status of the Species in the Action Area***

Based on surveys performed in 2020, there are 12 gnatcatcher territories within the action area (Figure 4), two of which may be directly impacted by vegetation removal. Approximately 11.5 acres of coastal sage scrub are expected to be temporarily removed for this Project. An estimated 5.3 acres of these 11.5 acres overlap with the upcoming Prado Spillway construction (Figure 3), and thus will be impacted for a longer duration (at least 5 years). Gnatcatchers were documented within the action area following the Corps' restoration of degraded habitat here, upon the completion of raising the main Prado Dam embankment around 2010. It is unclear if they occupied this area historically, prior to the installation of Prado Dam in the 1940s.

### ***Recovery***

Gnatcatchers within the vicinity of the action area face the same threats as the subspecies' range wide. Specifically, a wildfire burned across a portion of their habitat for 183 days in 2017 and 2018 on the other side of SR-91. It is likely that the gnatcatchers that have recently colonized the action area were displaced by that fire and found the suitable habitat that the Corps restored. The action area appears to have a large enough patch size to support gnatcatchers but the area is subjected to ongoing SARP and other Corps-related activities.

## **EFFECTS OF THE ACTION**

Regulations implementing the Act (50 CFR § 402.02) define the effects of the action as all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR § 402.17).

The regulations for section 7(a)(2) note that “a conclusion of reasonably certain to occur must be based on clear and substantial information, using the best scientific and commercial data available” [50 CFR § 402.17(a)]. When considering whether activities caused by the proposed action (but not part of the proposed action) or activities reviewed under cumulative effects are reasonably certain to occur, we consider factors such as (1) past experiences with activities that have resulted from actions that are similar in scope, nature, and magnitude to the proposed action; (2) existing plans for the activity; and (3) any remaining economic, administrative, and legal requirements necessary for the activity to go forward.

### **Least Bell’s Vireo**

#### *Effects to the Species*

Surveys conducted in 2021 detected five vireo territories within the 500-foot buffer the Corps used to estimate potential noise and other indirect impacts from construction activities. Two of these territories were found within the Project footprint/TCE, one of which had a documented nesting pair in 2020. These two territories represent less than 0.1 percent of the territories detected within the Santa Ana River watershed in 2020 (n=2,293; note: total numbers for 2021 are not yet available) and range-wide in 2018 (n=3,413).

The clearing of riparian habitat for Project construction will occur outside of the vireo breeding season (CM 1); therefore, we do not expect that vireo adults, eggs, or nestlings will be killed or injured during riparian habitat removal. However, vireos are territorial and exhibit site fidelity. As such, the two affected vireo males (or pairs) will lose their respective territories and be forced to relocate in 2022. The male vireos will probably be able to establish new territories elsewhere within the greater Prado Basin, although the displaced birds will be forced to compete with residents, which may delay territory establishment and decrease their reproductive fitness. Any decrease in reproductive output should be temporary. Therefore, we do not anticipate a lasting or significant effect to vireo numbers, distribution, or reproduction. The riparian habitat to be temporarily removed will be restored in place upon construction completion (CM 6), and vireo are expected to return to this habitat in 3 to 5 years, although the area is immediately adjacent to the Prado Dam spillway project, which may delay reoccupation.

Three vireo territories were found outside of the TCE but within the 500-foot buffer adjacent to the new pipeline installation. This work may be completed by the time vireos return in the breeding season, in which case they would not be affected, but if work is delayed, they may be subject to noise or other indirect effects. Increased noise may disturb these breeding vireo,

affecting their ability to establish and defend territories, or locate their young and mates. If disturbed while actively nesting, construction activities could result in nest failure or abandonment. If this occurs, we expect the effect to be temporary and only last up to one nesting season. To minimize noise impacts, if work along this pipeline alignment will extend into the nesting season, the construction contractor will erect a sound wall or other noise barrier at the edge of riparian habitat along the edge of the TCE prior to February 15 (CM 4).

The construction equipment expected to be in use during the nesting season would generate a maximum sound level ( $L_{max}$ ) of 85 dBA at 50 feet from the source (Federal Highway Administration 2006, Table 1).  $L_{max}$  is the highest instantaneous sound level measured during a specified period. Construction noise is commonly reported in maximum noise levels, which are not typically sustained over long periods of time. Construction equipment generally acts like a point source and will typically reduce at a rate of 6 dB per doubling of distance, without considering additional attenuation that varies with the environment (CalTrans 2016).

Additionally, a break in the line of sight between the noise source and the receptor using sound walls can result in a 5 dBA reduction (Federal Highway Administration 1995).

The Corps conducted noise monitoring in August 2021 to document ambient conditions and found that the vireo in the vicinity are exposed to 63 dBA. The Corps and the Service have previously agreed upon 5 dBA Leq hourly above ambient conditions as the threshold to assess impacts to vireo due to noise; in this case 68 dBA would be the threshold in occupied habitat west/southwest of the Prado spillway.

By reducing the expected maximum noise level by 5 dBA due to the sound wall (i.e., 80 dBA on the opposite side of the sound wall from construction), then doubling the distance from the point source of the sound to 100 feet (74 dBA with the 6 dB reduction), then further doubling to 200 feet, we estimate that 68 dBA will be reached at approximately 200 feet from the source. As such, we anticipate the three vireo territories within the 500-foot buffer may be affected by construction noise, but the Corps' noise monitoring protocol will determine the extent of the effects.

Regular noise monitoring will occur within the 500-foot buffer identified by the Corps (CM 5), and the Corps will provide an estimate of occupied vireo habitat that was subjected to noise above 60 dBA, where ambient noise levels are at or below 60 dBA and 68 dBA Leq hourly where ambient noise levels are above 60 dBA. In the past, the Corps' contractor calculated the distance at which noise levels would be in compliance by using a [line distance calculator](#), collecting noise exceedance/distance information, and using knowledge of the point source (construction activities). The resulting acreage impacted is expected to be less than that what occurs within the Corps' estimated 500-foot buffer. Noise effects within the area of temporary effects will be offset through arundo removal at a 1:1 acre ratio, per year of impact (i.e., if more than one breeding season was affected, which is not expected with this Project). With implementation of CM 5, we do not expect a significant effect to the vireo population due to noise impacts from the proposed Project. We expect vireo occupying as many as three territories may be negatively affected by construction noise.

### ***Effects to Vireo Recovery***

The number of vireo in the vicinity of the Project's action area has been steadily increasing, although substantial threats requiring ongoing management remain. A Draft Recovery Plan for the species was outlined in 1998 and coordinated actions by several agencies have been taken to promote the recovery of the vireo since it was listed in 1986. The primary goals of the draft vireo recovery plan are stated as: (1) maintain stable or increasing vireo metapopulations, each consisting of several hundred or more breeding pairs; (2) protect and manage riparian and adjacent upland habitats within the historic range of the vireo, (3) control non-native plant species, (4) control cowbird parasitism, and (5) conduct habitat restoration. Population surveys indicate that the Santa Ana River population has achieved the downlisting criterion in the draft recovery plan, although most of the other populations/metapopulations of vireo have not. This Project is not anticipated to have measurable effects on vireo recovery.

### **Coastal California Gnatcatcher**

#### ***Effects to the Species***

Surveys conducted in 2020 detected 12 gnatcatcher territories within the 500-foot buffer the Corps used to estimate potential noise and other indirect impacts from construction activities. Two of these territories were found within the Project footprint/TCE and will have their coastal sage scrub habitat removed. However, based on known locations of gnatcatcher territories and the vegetation that will remain, it appears they may be able to shift their territories without being displaced altogether. Vegetation clearing will occur prior to nesting season, although gnatcatchers are present year-round. Therefore, we do not anticipate loss to gnatcatcher nests, but all 12 gnatcatcher territories may be subject to noise and other indirect effects.

Increased noise could disturb these gnatcatchers, affecting their ability to establish and defend territories, or locate their young and mates. If disturbed while actively nesting, construction activities could result in nest failure or abandonment. If this occurs, we expect the effect to be temporary and only last up to one nesting season. To minimize noise impacts, the construction contractor will erect a temporary sound wall or other noise barrier along the edge of the TCE prior to February 15 (CM 4).

As previously discussed, the construction equipment to be used would generate a maximum sound level (L<sub>max</sub>) of 85 dBA at 50 feet from the source (Federal Highway Administration 2006, Table 1). We anticipate that, with sound walls in place, this noise should be reduced to approximately 68 dBA at 200 feet from the source. To assess effects to gnatcatchers, regular noise monitoring will occur within the 500-foot buffer during the nesting season, and the acres of occupied gnatcatcher habitat subjected to 68 dBA will be provided to the Service, as described above for vireo. The resulting acreage is expected to be less than what occurs within the 500-foot buffer. This acreage of temporary effects will be offset through coastal sage scrub restoration off-site, as coordinated with the Service, at a 1:1 acre ratio, per year of impact (i.e., if more than one breeding season was affected, which is not expected with this Project). With implementation of CM 5, we do not expect significant effects to the gnatcatcher population due to noise impacts

from the proposed Project. We expect gnatcatcher occupying as many as twelve territories may be negatively affected by construction noise. However, construction is expected to conclude or be nearly finished prior to the nesting season. And ongoing construction activities in the winter prior to the nesting season may limit the number of gnatcatchers that set up nesting territories in the 500-foot construction buffer. (Gnatcatchers do not exhibit nesting site fidelity, so a nesting site is selected each season.)

An estimated 6.2 acres of the 11.5 acres of coastal sage scrub habitat temporarily removed will be replaced upon completion of Project activities. The remaining 5.3 acres overlap with the Prado Dam spillway construction and will not be restored until the Prado Dam spillway construction is completed, estimated to occur in 2025 or later. The temporal loss of habitat will be offset by the restoration of 11.5 acres of coastal sage scrub at an offsite location, to be determined in coordination with the Service prior to start of construction, or the date by which such offsite restoration area(s) will be identified will be agreed upon by the Service and the Corps prior to the start of construction. Any area of overlap that is not able to be restored upon gas line Project completion will be compensated for offsite by the Prado Dam spillway project (CM 7).

### ***Effects to Recovery***

The proposed Project is not expected to have a measurable effect on the recovery of the species. With the restoration of an estimated 11.5 acres of coastal sage scrub off-site, we expect temporary impacts will be off-set and the current level of gnatcatcher occupation within the Project vicinity will be maintained.

### **CUMULATIVE EFFECTS**

Cumulative effects are effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur in the action area of the Federal action subject to consultation (50 CFR § 402.02). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. As such, the Prado Dam spillway modifications will be discussed in a separate section 7 consultation. The Service has no information regarding any future State, local, private, or tribal actions that are reasonably certain to occur in the action area that would have an adverse effect on vireo or gnatcatcher that would result in a loss to reproduction, numbers, and distribution in the action area.

### **CONCLUSION**

After reviewing the current status of the vireo and gnatcatcher, the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, we have determined that the activities considered in the biological opinion are not likely to jeopardize the continued existence of the least Bell's vireo or coastal California gnatcatcher. We reached this conclusion by considering the following:

**Least Bell's Vireo**

1. We expect vireo occupying two territories to be displaced by this Project. These territories represent less than 0.1 percent of the vireo territories within the Santa Ana River watershed and range wide. These displaced birds may suffer from reduced reproductive fitness but will still have the opportunity to nest in the initial and following years, therefore we do not expect a measurable effect on the population.
2. Habitat supporting an additional three vireo territories may be affected by construction noise, which may reduce the fitness and productivity of these birds. However, any associated impacts will be temporary and only last up to one nesting season during Project construction.

**Coastal California Gnatcatcher**

1. We expect up to 12 gnatcatcher territories may be affected by construction noise, which may reduce the fitness and productivity of these birds. However, any associated impacts will be temporary and only last up to one nesting season during Project construction.

**INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. The Service further defines "harm" to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the proposed protective measures and the terms and conditions of an incidental take statement and occurs as a result of the action as proposed.

The measures described below are non-discretionary and must be undertaken by the Corps so that they become binding conditions of any grant or permit issued to SoCalGas, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps: (1) fails to assume and implement the terms and conditions, or (2) fails to require SoCalGas to adhere to the terms and conditions of the incident take permit through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR § 402.14(i)(3)].

## **AMOUNT OR EXTENT OF TAKE**

### **Least Bell's Vireo**

We anticipate take in the form of harm for two vireo males associated with two vireo territories due to the temporary loss of their breeding, feeding, and sheltering habitat within 1.1 acres. These vireos are expected to become displaced, which will subject them to increased competition, greater risk of predation/nest parasitism, and decreased reproductive success. If the habitat of more than two vireo territories is removed by this Project, the take limit will have been exceeded and consultation will need to be reinitiated.

We anticipate take in the form of harm for the vireo (pairs and young) within up to three vireo territories that may be affected by construction noise, as anticipated by the Corps, within a 500-foot buffer of the Project' footprint. These birds may suffer a reduction in fitness and productivity during Project construction, expected to last one nesting season. The take exemption will be exceeded if more than three vireo territories are determined to be impacted by noise above 68 dBA Leq hourly.

### **Coastal California Gnatcatcher**

We anticipate take in the form of harm gnatcatchers (adults and young) within in up to 12 gnatcatcher territories that may be affected by construction noise within a 500-foot buffer of the Project footprint as anticipated by the Corps. These birds may suffer a reduction in fitness and productivity during Project construction, expected to last one nesting season. The take exemption will be exceeded if more than 12 gnatcatcher territories are determined to be affected by noise above 68 dBA Leq hourly.

## **EFFECT OF TAKE**

### **Least Bell's Vireo**

Two vireo territories are less than 0.1 percent of the territories recorded in the Santa Ana River watershed in 2020 (n=2,293), and range-wide in 2018 (n=3,413). As these are a fraction of the greater vireo numbers, we do not anticipate a measurable effect on the subspecies. We anticipate most displaced or disturbed vireo will still be able to nest within the same or following years, and any temporary effect on reproduction and distribution of vireo will be short-lived. In the accompanying biological opinion, the Service determined that this level of anticipated incidental take is not likely to result in jeopardy to the vireo.

### **Coastal California Gnatcatcher**

Any temporary effect on gnatcatcher reproduction will be short-lived. In the accompanying biological opinion, the Service determined that this level of anticipated incidental take is not likely to result in jeopardy to gnatcatcher.

## REASONABLE AND PRUDENT MEASURES

We have determined that the following reasonable and prudent measures are necessary and appropriate to minimize the impact of the incidental take of least Bell's vireo and coastal California gnatcatcher:

- RPM 1. The Corps and/or SoCalGas shall implement the Project as described in the sections entitled "Description of the Proposed Action", including "Conservation Measures".

## TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline monitoring and reporting requirements. These terms and conditions are non-discretionary.

- TC 1.1 The Corps and/or SoCalGas shall provide accounting of occupied vireo and gnatcatcher habitat that has been subjected to noise exceeding 60 dBA (in areas where ambient noise is at or below 60 dBA) and 68 dBA Leq (in areas where ambient noise is greater than 60 dBA) hourly during the nesting season (February 15 – August 15) due to the Gas Line Relocation Project. This will be provided in a report provided to the Palm Springs Fish and Wildlife Office (PSFWO) within one year of Project completion.
- TC 1.2 The Corps and/or SoCalGas shall report on the amount of vireo and gnatcatcher take (i.e. the number of vireo and gnatcatcher displaced or subjected to noise levels above 68 dBA Leq hourly) during the nesting season (February 15 – August 15). This will be provided in the report to the PSFWO upon Project completion and should detail observed impacts to vireo and gnatcatcher.
- TC 1.3 The Corps and/or SoCalGas shall have an offsite location for coastal sage scrub restoration, determined in coordination with the Service, secured prior to the start of Project construction, or the date by which such offsite restoration area(s) will be identified will be agreed upon by the Service and the Corps prior to the start of construction. The acreages are based on impacted coastal sage scrub habitat by proposed project and does not include Prado Dam spillway project overlap areas. If mitigation bank credits are used for restoration, either the minimum impact acres need to be purchased, or a three-fourths portion of anticipated impact (or other agreed upon amount with the Service) must be purchased before the start of construction. A record of purchase shall be provided to the Service. A periodic habitat impact report will be generated for the Service to evaluate whether more mitigation bank credits need to be purchased.



## **DISPOSITION OF SICK, INJURED, OR DEAD SPECIMENS**

Pursuant to 50 CFR § 402.14(i)(1)(v), the Corps and/or SoCalGas must notify the PSFWO at 760-322-2070 within 3 working days if any endangered or threatened species is found dead or injured as a direct or indirect result of this Project's implementation. Notification must include the date, time, location, and photograph of the injured animal or carcass, and any other pertinent information. In addition, mark dead animals appropriately, photograph, and leave the carcass on site; transport injured animals to a qualified veterinarian; and contact the PSFWO regarding the final disposition of any treated animals that survive.

## **CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations (CR) are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information. We recommend the following actions:

- CR 1. The Corps and SoCalGas should coordinate with the Western Riverside Multiple Species Habitat Conservation Plan, the Riverside-Corona Resource Conservation District, the Southwest Resource Management Association, and/or other entities in the area to identify locations that have recently burned and displaced gnatcatchers, in order to restore a large patch size which will support gnatcatchers and reduce the risk of burning again following restoration. This land may require purchasing and thus entail a larger group effort to be managed by a conservation organization.

## **REINITIATION NOTICE**

This concludes formal consultation regarding the Prado Dam Gas Line Relocation as described in materials submitted to us. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount of extent of incidental take specified in the incidental take statement is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

For further information about this biological opinion, please contact [Rebecca Christensen](#)<sup>2</sup> of the PSFWO at 760-322-2070, extension 416.

Sincerely,

Scott A. Sobiech  
Field Supervisor

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**Ambient Leq hourly noise readings taken January 2021**