

San Antonio Creek Bridge Scour Mitigation

Approximately 12.0 miles north of the City of Lompoc
in the County of Santa Barbara

05-SB-01- PM 33.1

Project ID: 05-1400-0063

Project EA: 05-1F810

SCH: 2018101044

Initial Study with Mitigated Negative Declaration / Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

June 2019



General Information About This Document

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study with Mitigated Negative Declaration/Environmental Assessment which examines the potential environmental impacts of upgrading erosion control on the southwestern bent of the San Antonio Creek Bridge on State Route 1 in Santa Barbara County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA), and Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

The Initial Study/Draft Environmental Assessment circulated for public review and comment from October 19, 2018 to November 18, 2018. Comments received during this period are included in Appendix D, Comment and Responses, which has been added since the draft environmental document circulation. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated.

Hard copies of this document as well as the technical studies are available at:

- ❖ Caltrans District Office at 50 Higuera Street, San Luis Obispo, California 93401

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Matt Fowler, Central Region Environmental, 50 Higuera Street, San Luis Obispo, CA 93401; (805) 542-4603 (Voice) or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

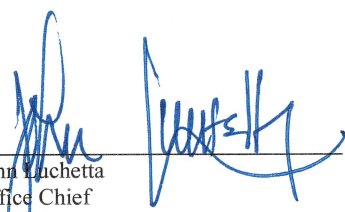
Upgrade the existing erosion control features protecting bridge foundation from
severe scour on State Route 1, at post mile 33.1 in Santa Barbara County.

**Initial Study with Mitigated Negative Declaration/
Environmental Assessment with Finding of No Significant Impact**

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

6-21-19
Date of Approval


John Luchetta
Office Chief
Central Region Environmental Division
California Department of Transportation
NEPA and CEQA Lead Agency

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California Department of Transportation
Finding of No Significant Impact (FONSI)

For the

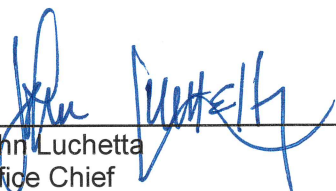
San Antonio Creek Bridge Scour Mitigation Project

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and contents of the attached Environmental Assessment and incorporated technical reports.

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 US Code 327.

Date

6-21-19



John Luchetta
Office Chief
Central Region Environmental Division
California Department of Transportation



Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) will prevent further scour damage on the southwestern bent of the San Antonio Creek Bridge (Br. No. 51-0237 L/R), on State Route 1 at post mile 33.1 in Santa Barbara County about 12 miles north of the city of Lompoc. The project is set in rural surroundings, with State Route 1 identified as a divided four lane highway.

Determination

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the project will not have a significant effect on the environment for the following reasons.

The project will have no effect on: aesthetics and visual resources, farmland/timberland, geology and soils, hydrology and water quality, floodplain, existing and future land use, growth and community, population and housing, public services, recreation, transportation and traffic, utility services, emergency services, mineral resources, and paleontological resources.

The project will not create any impacts due to air quality, noise, vibration, water surface runoff or hazardous waste/materials; the project will not lead to impacts associated with seismic activity or ground disturbance

In addition, the project will have no significant adverse effect on biological resources because the project includes measures that will reduce the potential effects to less than significant.

The project has the potential to produce an adverse effect on cultural resources as the project site contains considerable amounts of important cultural resources. The project will incorporate appropriate measures that will reduce the potential effects to less than significant.

Biological Measures

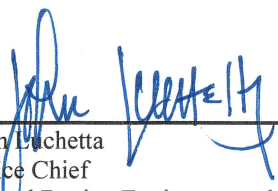
- ◆ San Antonio Creek and the associated arroyo willow thicket habitat will be completely avoided. No direct or indirect impacts will occur. A vibratory hammer will be used during construction to avoid impacting species inhabiting the creek.
- ◆ Environmentally Sensitive Area fencing will be installed along the maximum disturbance limits to minimize disturbance to natural communities. Special Provisions for the installation of ESA fencing will be included in the Construction Contract and will be identified on the project plans. Prior to the start of construction activities, ESA areas will be delineated in the field and will be approved by the Caltrans Environmental division.
- ◆ Prior to construction, Caltrans shall retain a qualified Biological Monitor to implement all biological pre-construction surveys, biological construction monitoring and reporting required for the project.
- ◆ All areas temporarily disturbed during construction will be restored back to pre-project conditions. Enhancement planting will be conducted on-site and in-kind using native plant species. Plant restoration or reestablishment will be implemented to prevent a net loss of streambed function and values.
- ◆ All necessary measures will be employed to protect nesting and migrating birds during project construction.
- ◆ The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project.

Cultural Measures

- ◆ Adverse effects to CA-SBA-1010 will be resolved through a Phase 3 data recovery. Procedures for fieldwork, laboratory analysis, and reporting, as well as procedures for archaeological monitoring, will be discussed in detail in the Archaeological Treatment Plan.
 - Phase 3 data recovery will be conducted within the project limits prior to project construction activities to prevent the potential loss of cultural data. Phase 3 data recovery may include, but is not limited to, the following activities:
 - Surface investigation, shovel test pits, core sampling, block excavation, trenching, and remote sensing.
 - Material recordation, recovery, collection and analysis.
 - All recovered cultural materials will be curated at an appropriate curation facility.
 - Public distribution and/or outreach of cultural information obtained from analysis of data recovery efforts.

Mitigated Negative Declaration

- ◆ All measures prescribed by the approved Memorandum of Agreement will be implemented.
- ◆ Establishing environmentally sensitive areas within the project limits to minimize any potential impacts to Cultural resources.
- ◆ Monitoring by a qualified archaeologist and Native American tribal representative will be required during the archaeological investigation and during project construction.
- ◆ During construction, activities that involves ground disturbance will require the presence of the archaeological and Native American monitors.
- ◆ If significant cultural materials are encountered during project-related activities, it may be necessary to temporarily divert work away from the location until cultural materials can be properly assessed, documented and/or recovered.
- ◆ If significant cultural materials are encountered during project-related activities and are either documented or recovered, a more formal and extensive report may be required.



John Luchetta
Office Chief
Central Region Environmental Division
California Department of Transportation

6-21-19
Date



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Chapter 1 Proposed Project

1.1 Introduction

NEPA Assignment

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012 and was renewed on December 23, 2016 for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

Caltrans proposes to address scouring found on the San Antonio Creek Bridge (Br. No. 51-0237L/R). The bridge is located on State Route 1 (SR-1) at postmile 33.1 in the County of Santa Barbara. The project is in a rural setting, approximately 12.0 miles north from the City of Lompoc. Figures 1-1 and 1-2 show the project's vicinity and location.

A large area of scour damage has developed along the southern bank of the creek and threatens to flank the upstream side of the existing sheet pile wall and rock slope protection (RSP). Continued scour damage would threaten the footings of the southwestern bent (Bent 2) on the northbound bridge (see Figure 1-3). The San Antonio Creek Bridge has been listed as scour critical, and countermeasures to address scouring are recommended as a plan of action.

The project is included in the 2016 State Highway Operation and Protection Program (SHOPP) to be built in fiscal year 2022/2023. The project is currently estimated to cost approximately \$1,270,000 and is anticipated to take approximately 80 working days to complete.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to upgrade the erosion control features protecting Bent 2 from severe scour.

1.2.2 Need

Existing erosion control features are inadequate at preventing continued lateral bank erosion that could potentially undermine the footings of Bent 2. The existing bridge foundation was identified as scour critical and The Structure Replacement and Improvement Needs Report (STRAIN) determined the need for scour mitigation.

1.3 Project Description

Caltrans proposes to upgrade the erosion control features on the San Antonio Creek Bridge.

Scour damage has developed near the foundation of the bridge. Existing erosion control features may not be capable of protecting the bridge foundations from further erosion. The upgrade will involve extending the length of the existing sheet piles and adding additional RSP. The new sheet piles would extend along the creek's southern bank and upstream from the bridge. The additional RSP will be placed along the slope above the creek and behind the sheet piles, mimicking the existing design.

The project will prevent severe scour from developing around the foundation of the Bent 2 columns and will also help reduce the risk of the bridge foundation from being undermined by scour.

A temporary access route will need to be constructed to reach the edge of the creek and the work site.

No work will be conducted within the creek bed and construction is planned to occur during the dry seasons when creek levels are low.

The project will occur within Caltrans right-of-way, and will not modify the existing roadway geometry or capacity. The existing bridge will not be modified.

A preliminary layout map of the proposed project is available in Appendix G.

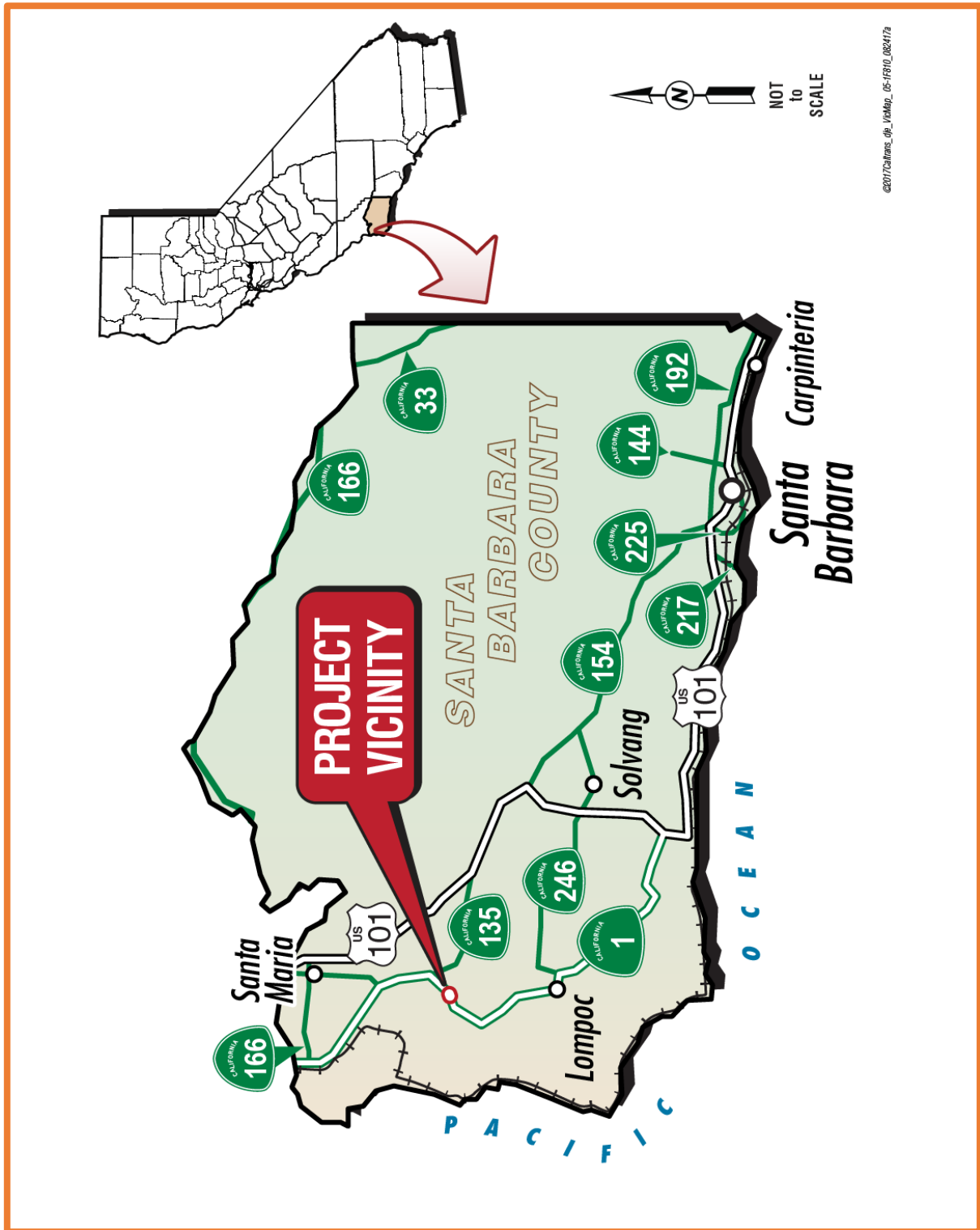


Figure 1-1 Project Vicinity Map



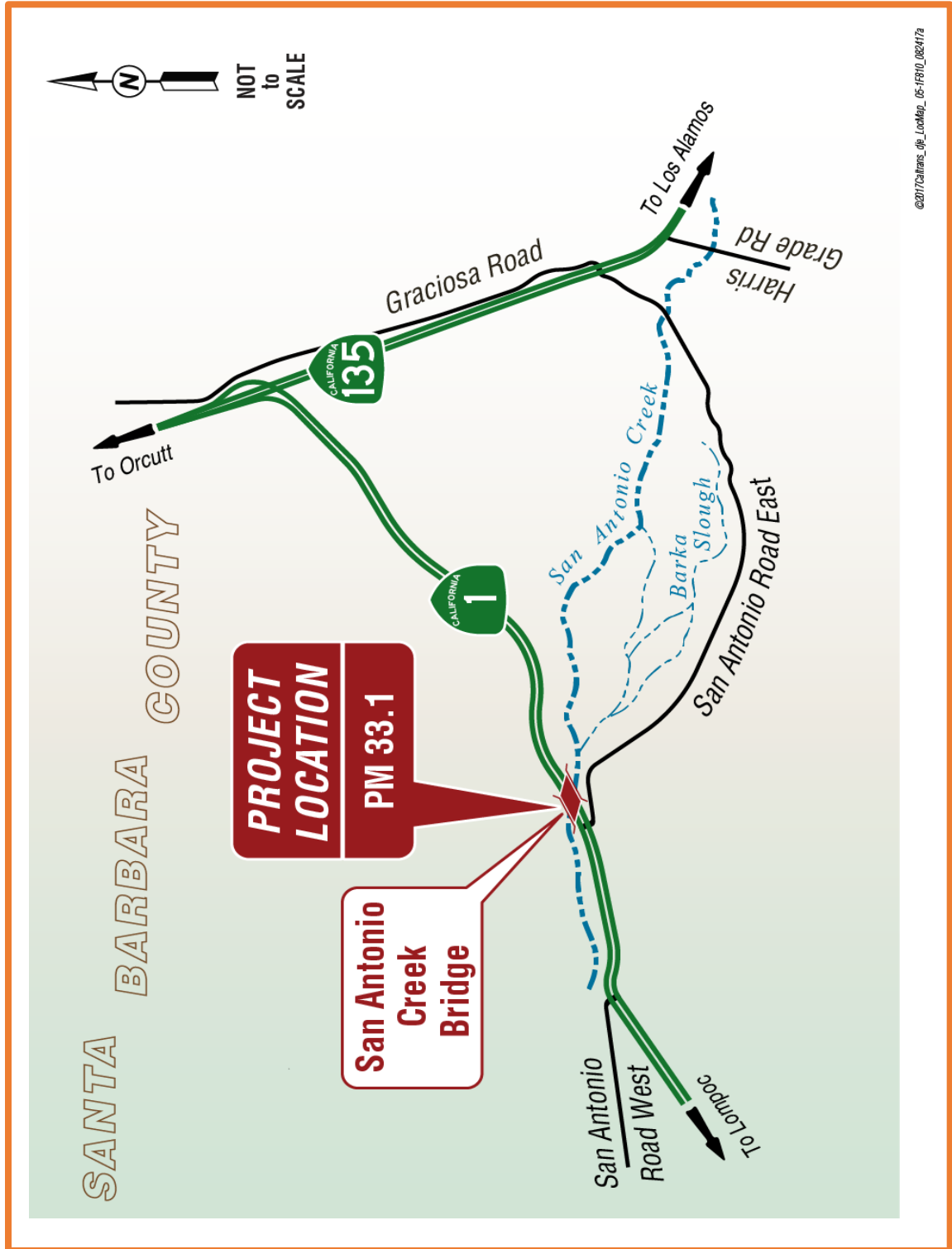


Figure 1-2 Project Location Map



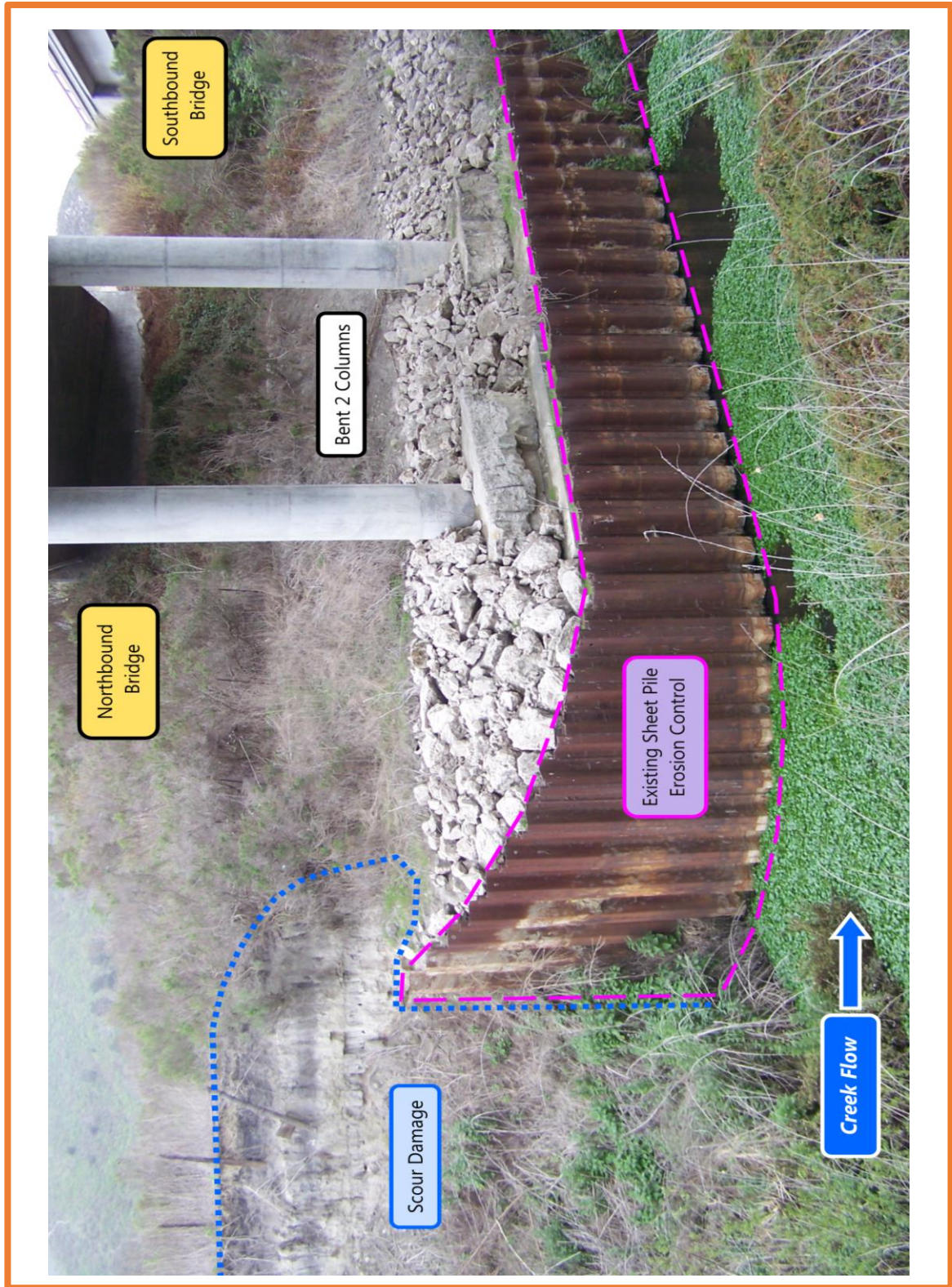


Figure 1-3 Scour Damage Threatening Bridge Footings, Southern Bank of San Antonio Creek



1.4 Project Alternatives

There are two alternatives under consideration: a Build Alternative and a No-Build Alternative.

The alternatives under consideration were developed by an interdisciplinary team to achieve the project purpose while avoiding or minimizing environmental impacts. Several criteria were taken into consideration when evaluating the various project alternatives, including the project's purpose and need, cost and environmental impacts.

This project contains a number of standardized project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

1.4.1 Build Alternatives

The Build Alternative proposes to extend the existing sheet pile wall on the southern bank of the creek, upstream from the northbound bridge.

The new sheet pile wall will be 60 feet long and will extend southward from where the existing sheet pile wall ends. The new sheet pile wall will be installed approximately 5 feet behind the existing sheet pile wall, with an overlap of approximately 10 feet, extending the existing sheet pile wall by 50 feet. The new sheet pile wall will be placed upslope of the creek banks, outside of the water's edge. The new sheet piles will be installed in sections. Each section will be driven directly into the ground using a vibratory hammer. The depth of the new sheet piles will match the existing. The top of the new sheet pile wall will closely follow the slope of the creek bank. New RSP will also be placed in an excavated trench behind the new sheet pile walls, upslope of the creek bank. The new RSP installation will mimic the design of the existing erosion control measure. A visual concept of the Build Alternative is shown in Figure 1-4.

A temporary access route will be required to reach the existing sheet pile wall and creek bank during the construction process.

Work within the creek is not anticipated and will be avoided.

The estimated project cost is approximately \$1,270,000.

The estimated project duration is approximately 80 working days.

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative will leave the existing erosion control system in place without any modifications. Scour damage will continue to threaten the foundation of the bridge. The No-Build Alternative will not address the potential for foundation failure caused by the eroding creek bank. The No-Build Alternative will avoid impacts to cultural and biological resources, but would threaten the integrity and safety of the bridge.

1.5 Preferred Alternative

A Build Alternative and a No-Build Alternative were the only alternatives considered for the project. After public circulation of the Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment, the two alternatives were further evaluated. Caltrans identified the Build Alternative as the preferred alternative after consideration of the project's purpose and need, funding, schedule, construction methods, and its potential to impact environmental resources.

The preferred alternative meets the purpose and need of the project. This alternative will prevent further scour damage of the Bent 2 columns and reduces the potential for foundation failure caused by the eroding creek bank. The preferred alternative will result in temporary and permanent impacts to environmental resources that will be mitigated for by incorporating the appropriate measure for each environmental resource into the project.

Caltrans has determined that the No-Build Alternative will not satisfy the project's purpose and need, which could potentially lead to further scour damage and continue to threaten the foundations of the bridge.

1.6 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft Initial Study/ Environmental Assessment

No other alternatives were considered for this project since there was only one solution for addressing the ongoing scour damage.

The only viable alternative for this project consists of installing additional sheet piles along the south abutment of the northbound San Antonio Creek Bridge to prevent further scouring of the creek bank.

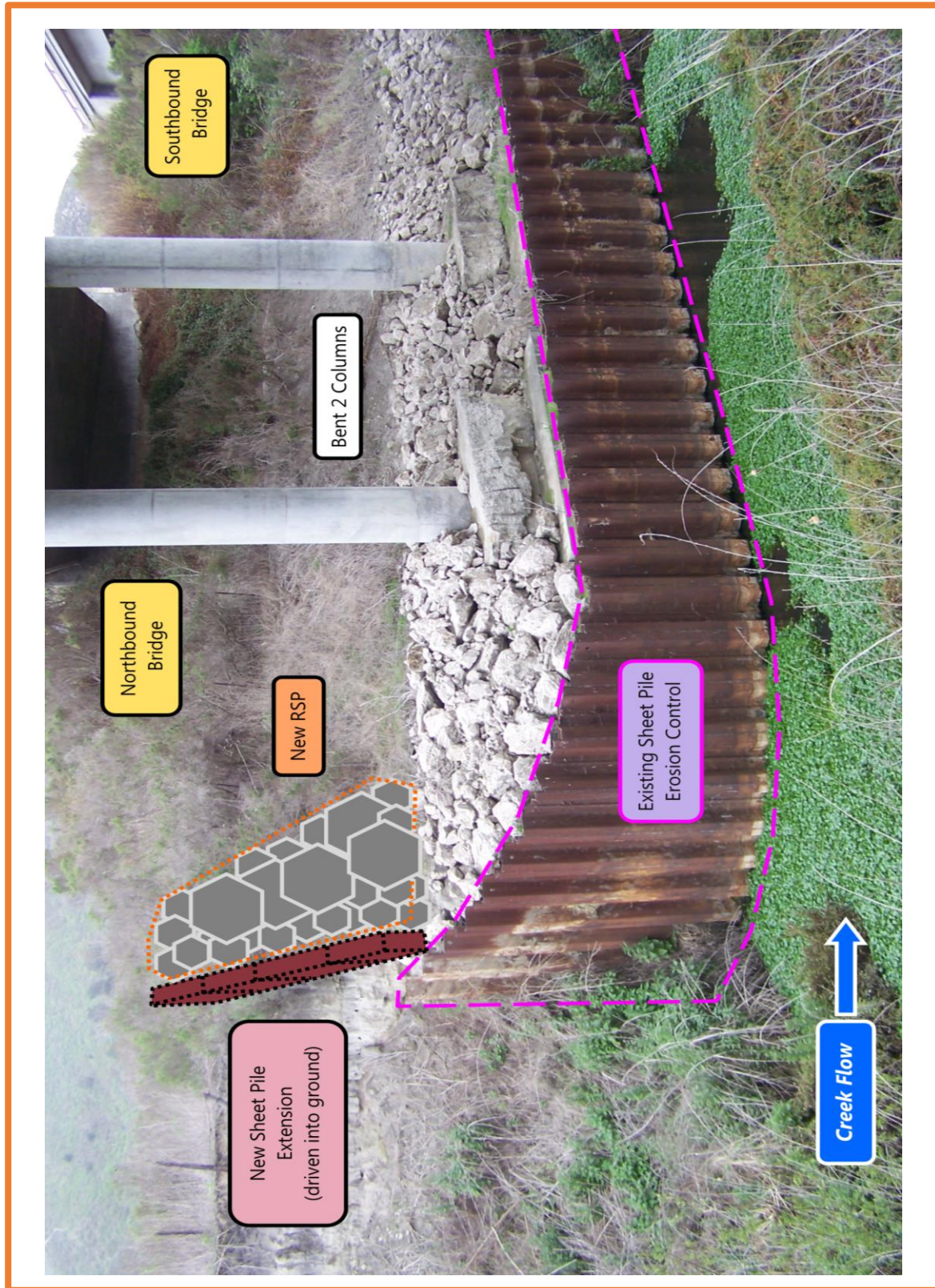


Figure 1-4 Visual Concept of Build Alternative



1.7 Permits and Approvals Needed

The following permits, review, and approvals will be required for project construction.

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained before construction
State Historic Preservation Officer	Memorandum of Agreement (MOA)	Obtained and Executable



Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. As a result, there is no further discussion of these issues in this document.

- **Existing and Future Land Use:** The erosion control upgrade will not change or impact existing land use; the existing bridge and road will not be altered. (Project Description)
- **Consistency with State, Regional, Local Plans and Programs:** The project is consistent with local zoning plans; project is located within state right-of-way. (Project Description)
- **Coastal Zone:** The project is not located within the Coastal Zone and there will be no effects to coastal resources; the Pacific coastline is located approximately 8 miles west of the project site. (Project Description)
- **Wild and Scenic Rivers:** No wild or scenic river is located within the vicinity of the project; project activities are limited to the banks of San Antonio Creek (Project Description)
- **Parks and Recreational Facilities:** No parks or recreational facilities are located within the vicinity of the project; the nearest park is located approximately 7 miles north of the project site. (Project Description)
- **Section 4(f) Resources:** No Section 4(f) resources will be impacted by the project. Adjacent to the project area is a known prehistoric archaeological site that is eligible for inclusion in the National Register of Historic Places. The archaeological site has been investigated on several occasions in the past and was determined to be exempt from Section 4(f) under 23 CFR 774.13(b)(1) as the site did not warrant preservation in place. During cultural investigations for this project, it was found that the boundary of the adjacent prehistoric archaeological site extended into the project area. Caltrans cultural specialists have deemed that the archaeological resources found within the project area did not warrant preservation in place, therefore the project area is exempt from Section 4(f) under 23 CFR 774.13(b)(1). (Historic Property Survey Report, June 16, 2018)
- **Farmland/Timberland:** The County of Santa Barbara's zoning map identifies the area surrounding the project as being controlled by Vandenberg Air Force Base. There is no farmland or timberland within the project limits. (Project Description)

- **Growth:** The project does not add capacity to the roadway and will not increase development or population as the project will be limited to upgrading the existing erosion control features. (Project Description)
- **Community Impacts:** The project will not affect the character or cohesion of any nearby community. The area adjacent and around the project is rural land. The closest residence is approximately three miles from the project limits. The nearest town is approximately 10.0 miles from the project site. No minority or low-income population that would be adversely affected by the project has been identified as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898. (Project Description)
- **Traffic and Transportation:** The project is located off the highway surface and project construction would have little to no effect on the traveling public. (Project Description)
- **Paleontology:** There is no probability of encountering or impacting paleontological resources during project construction. (Paleontology Assessment, August 24, 2017)
- **Hazardous Waste:** The project will not involve or disturb any known hazardous waste materials. This project has low risk for encountering unanticipated hazardous waste or other contamination-related issues. Aerially deposited lead is not anticipated as excavations and soil disturbance will occur away from the roadway. (Initial Site Assessment, August 24, 2017)
- **Floodplain:** San Antonio Creek stretches from east of Highway 101 near Los Alamos west along Highway 135 and the Los Alamos Valley through the Vandenberg Air Force Base (VAFB) where it drains to the Pacific Ocean. The FEMA mapped floodplain ends at the boundary of the VAFB (Appendix K). A Hydraulic Engineer Center's River Analysis System (HEC-RAS) model was created with field survey information, information from VAFB and historical data from bridge inspection reports. Analysis of the HEC-RAS model by Caltrans hydraulic specialist indicated that the project will not alter flood sources or expose residences, buildings or crops to flooding, and indicated no significant change to the 100-year floodplain water surface elevation as a result of the project. Therefore, the project will have no significant floodplain encroachment (Location Hydraulic Study, January 24, 2019).
- **Visual:** The project is located below the roadway, along the creek. The project would have limited to no visibility for the traveling public and will not adversely affect the surrounding views. (Visual Assessment, September 13, 2017)
- **Air Quality:** The project is not involved in altering the existing roadway alignment or traffic capacity. The project is located in an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS). Therefore, conformity requirements do not apply. No long-term impacts to air quality are anticipated. Construction impacts discussed in Section 2.4 include short-term impacts to air quality.

- **Noise:** This project does not propose to construct a highway at a new location, or make any physical alteration of an existing highway alignment, or alter the existing traffic capacity of a highway. This project is not considered a Type 1 project under NEPA, and no further noise analysis is necessary for the project. No long-term impacts in terms of noise are anticipated. No nearby residences exist within three miles of the project limits. Construction Impacts discussed in Section 2.4 include potential short-term noise impacts resulting from construction activities.
- **Utilities and Emergency Services:** The project will not impact or effect any known existing utilities. The project will not impact or effect emergency services operating in the vicinity because project construction will occur off the paved roadway. (Project Description)

2.1 Human Environment

2.1.1 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. The ARPA requires

that a permit be obtained before excavation of an archaeological resource on such land can take place.

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)¹ between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Affected Environment

The following analysis of cultural resources was derived from the Historic Property Survey Report (June 18, 2018).

The project is located adjacent to the San Antonio Creek Bridge (#51-0237L/R), which was constructed in 1966, and was previously determined to be a Category 5 bridge, meaning it is not eligible for listing in the NRHP. As such, it is also not eligible for listing in the CRHR and is not considered a historical resource for the purposes of CEQA.

The project is partially within the mapped boundaries of the Barka Slough Site (CA-SBA-1010), a prehistoric archaeological site that lies on the southern bank of San

¹ The MOU is located on the SER at http://www.dot.ca.gov/ser/vol2/5024mou_15.pdf

Antonio Creek immediately downstream from the Barka Slough. The Barka Slough Site is a complex stratified, multicomponent prehistoric site with excellent preservation of archaeological materials. Buried under 1-2 meters (3-5 feet) of non-cultural sediment, it is exposed in the south bank of San Antonio Creek. It encompasses approximately 22,500 square meters immediately downstream from Barak Slough. The site is eligible for inclusion in the National Register of Historic Places (NRHP) and has been investigated on several occasions.

The Barka Slough Site has been investigated on several occasions in the past, and these investigations have identified the presence of cultural artifacts and materials.

Emergency archaeological excavations were conducted in 1973 for deposits that were eroding from the San Antonio Creek cut banks. That effort included two 1.5 by 3.0-meter (5 by 10 foot) units about 30 meters (100 feet) apart. The excavations revealed complex stratigraphy, and several features were exposed during excavations, including a living floor littered with mammal bone, elk and deer antlers, lithic debitage, fire-altered rocks, shellfish remains, and various flaked stone tools. A stratum containing extensive ash deposits (interpreted as hearth features) was also excavated. Investigations have concluded that the Barka Slough Site functioned as a seasonal hunting camp or habitation site at the edge of a stream or slough.

Several subsequent investigations were completed at the Barka Slough Site during efforts to rebuild SR-1 in the mid-1980s. The creek banks within the site were intensively examined to determine the extent of the site exposed by erosion along the creek and excavated 12 holes with 6-inch-diameter auger to define boundaries south of the creek. Six backhoe trenches north of SR-1, five on an upper terrace and one on a lower terrace, were excavated. Archaeological materials found in the upper terrace trenches suggest that these materials had been redeposited from elsewhere. Therefore, in place archaeological deposits in the upper terrace are unlikely. The trench on the lower terrace revealed stratigraphy that did not correspond to the creek bank exposure and revealed archaeological materials that might reflect an upslope extension of the archaeological deposit exposed in the creek bank or could represent a subsequent occupation.

As part of an effort to determine whether the banks of San Antonio Creek could be stabilized to preserve the Barka Slough Site, a feasibility stabilization assessment was conducted in 1993. It was noted in the assessment that the primary mechanism for erosion at the site appeared to be undercutting of the lower creek bank, causing the upper creek bank to slip downward. Water itself was not the mechanism eroding the cultural deposit. After examining the site, it was concluded that “while physical protection and conservation is possible, data recovery is more appropriate because site preparation for installing a protective measure would quite likely destroy most of the remnant archaeological deposit and would not be cost effective.”

A Phase 1 survey and an Extended Phase 1 Study were conducted to better define the site’s eastern boundary and identify the presence/absence of other potential site locations that may extend into the project area. Based on results from the Extended

Phase 1 study prepared in October 2017, a Phase 2 investigation was conducted in December 2017. Findings from both the Phase 1 and Phase 2 efforts were compiled in the Historic Property Survey Report (HPSR) in June 2018.

A summary of all agency coordination conducted for this project is presented in Chapter 4, Comments and Coordination.

Extended Phase Study

As noted, CA-SBA-1010 extends into the study area. Due to poor surface visibility during the Phase 1 survey, surface artifacts were unable to be visibly observed. Therefore, it was necessary to complete an Extended Phase 1 subsurface testing to determine whether archaeological materials associated with this resource were present. That effort was completed in October 2017.

The Extended Phase 1 survey involved multiple subsurface investigations and analysis. These investigations involved excavating several trenches that reached a depth of between 2 and 4 feet within the study area.

Analysis of the Extended Phase 1 survey revealed that the study area contained a variety of archaeological deposits at various depths. Due to the unexpected findings of the Extended Phase 1 survey, Caltrans determined that a Phase 2 investigation and study was warranted.

The Phase 2 fieldwork was conducted in December 2017 and involved additional excavations that investigated deeper beneath the surface. A mechanical coring machine was used to reach deeply buried archaeological deposits. The fieldwork also included several shovel test pits to more accurately define the CA-SBA-1010 within the project's study area. Analysis of the Phase 2 investigation revealed a relatively dense archaeological deposit within the study area.

Based on the Extended Phase 1 and Phase 2 efforts, Caltrans recommends that the archaeological deposit found within the study area contributes to the site's eligibility for the National Register of Historic Places (NRHP).

Environmental Consequences

Caltrans has determined a Finding of Adverse Effect for the San Antonio Creek Bridge Scour Mitigation Project and has obtained concurrence from SHPO August 1, 2018 (Appendix C).

The project has identified prehistoric archaeological resource contained within the entire APE of the project. CA-SBA-1010 has been identified to have a complex, stratified, multicomponent prehistoric archaeological site with excellent preservation of archaeological materials. Cultural studies have found that the archaeological deposits within the APE contribute to the site's NRHP eligibility.

The Build Alternative associated with the project will take place within the existing Caltrans right-of-way, and the APE encompasses CA-SBA-1010.

Construction activities related to the current project have the potential to cause physical destruction or damage to portions of the historic property.

Specific project-related activities that would impact portions of CA-SBA-1010 include: grading for access road and laydown area, installation of extended sheet piles, RSP and geotechnical boring. Each of the project components will result in substantial ground disturbance within the APE.

Access Road and Laydown (Staging) Area

Grading for the access road and laydown area will occur within the boundary of CA-SBA-1010. Grading activities would potentially produce a vertical impact of a maximum of 3 feet below the existing surface.

Sheet Pile Wall and RSP

A 60-foot-long sheet pile wall will be installed 5 feet behind the existing sheet pile wall and overlap the last 10 feet of the existing sheet pile wall. The sheet piles will be driven in to the ground to a depth that will match the existing sheet pile wall tip elevation of 180.0 feet. Installation of the sheet pile wall would potentially produce vertical impacts to CA-SBA-1010 of approximately 30-60 feet below the existing surface as the top of the new sheet pile wall will match existing grade.

New RSP will also be installed behind and upslope of the new sheet pile wall. Installation of the RSP will involve the excavation of a trench which will then be filled with RSP at a maximum of 1.5:1 slope to the existing bridge abutment fill. Trenching for the RSP would potentially produce a vertical impact of approximately 8 feet below existing grade.

Geotechnical Boring

A single boring with Standard Penetration Test (SPT) sampling will occur at the site. The boring will be drilled with a truck-mounted drill rig utilizing the punch core rotary wash drilling method. The boring will be drilled below the bridge on the stream terrace between the stream cut bank and embankment fill to a depth of 30 feet.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans finds that there is a historic property affected pursuant to Programmatic Agreement Stipulation IX.B. The undertaking will have an adverse effect on the portion of CA-SBA-1010 within the project's APE, and Caltrans is consulting to resolve adverse effects pursuant to Programmatic Agreement Stipulation X, 36 CFR 800.6(a). In addition, Caltrans has obtained an approved Memorandum of Agreement (MOA) as part of the Section 106 Obligations.

After the potential project effects were evaluated, Caltrans recommends that the appropriate treatment measures be implemented to fulfill Section 106 Obligations.

The following measures will be implemented to mitigate the project's impacts to cultural resources:

1. Adverse effects to CA-SBA-1010 will be resolved through a Phase 3 data recovery. Procedures for fieldwork, laboratory analysis, and reporting, as well as procedures for archaeological monitoring, will be discussed in detail in the Archaeological Treatment Plan.
2. Phase 3 data recovery will be conducted within the project limits prior to project construction activities to prevent the potential loss of cultural data. Phase 3 data recovery may include, but is not limited to, the following activities:
 - a) Surface investigation, shovel test pits, core sampling, block excavation, trenching, and remote sensing.
 - b) Material recordation, recovery, collection and analysis.
 - c) All recovered cultural materials will be curated at an appropriate curation facility.
 - d) Public distribution and/or outreach of cultural information obtained from analysis of data recovery efforts.
3. The MOA was obtained after consultation with Native American representatives and SHPO to implement appropriate mitigation measures for CA-SBA-1010. The MOA requires that an Archaeological Treatment Plan be implemented for the project. If changes to the project's Archaeological Treatment Plan or APE are necessary, the MOA may require revisions and approval by SHPO. Project activities that may adversely affect cultural resources are not allowable until completion of fieldwork that is prescribed in the Archaeological Treatment Plan. Yearly reports documenting fulfillment of commitments outlined in the MOA will be submitted to the SHPO.
4. Establishing environmentally sensitive areas (ESA) within the project limits to minimize any potential impacts to Cultural resources.
5. Monitoring by a qualified archaeologist and Native American tribal representative will be required during the archaeological investigation and during project construction.
6. During construction, activities that will involve ground disturbance will require the presence of the archaeological and Native American monitors.
7. If significant cultural materials are encountered during project-related activities, it may be necessary to temporarily divert work away from the location until cultural materials can be properly assessed, documented, and/or recovered.
8. If significant cultural materials are encountered during project-related activities and are either documented or recovered, a more formal and extensive report may be required.

9. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
10. Discovery of human remains is not anticipated. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). The person who discovers the remains will contact District 5 Environmental Branch, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Water Quality and Storm Water Runoff

Regulatory Setting

Federal

Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source² unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm

² A point source is any discrete conveyance such as a pipe or a man-made ditch.

water from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).
- The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”
- The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent³ standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State

Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that

³ The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.”

The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. The Caltrans MS4 permit covers all Caltrans rights-of-way, properties,

facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Caltrans MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012 and became effective on July 1, 2013. The permit has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to

the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and if the project had more than 30 acres of disturbed soil area, before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A Water Quality Assessment was completed for the project on August 27, 2017.

The project is located approximately 13 miles north of the town of Lompoc in Santa Barbara County. The region is regulated by the Central Coast Regional Water Quality Control Board (CCRWQCB) and the Central Coast Basin Plan. A water body that may be impacted by the project is San Antonio Creek. The creek originates about 10 miles east of Los Alamos in the Solomon Hills. It passes through the town of Los Alamos and continues downstream through Vandenberg Air Force Base before reaching the Pacific Ocean.

The San Antonio Creek has been identified as an impaired water body by the CCRWQCB and is on the 2014-1015 3303(d) list Total Maximum Daily Load (TMDL) Priority Schedule of impaired waters.

Environmental Consequences

The project is not expected to cause significant environmental impacts to San Antonio Creek as the project will not involve any work in the water. The project would not alter the current water flow pattern of San Antonio Creek.

The new sheet pile wall will be installed behind the existing erosion control measure and upslope from the water's edge. New RSP will be placed behind the sheet pile wall as part of the upgraded erosion control, but no RSP will be placed in the creek. Considering the project will involve grading and excavations, these construction activities could generate stormwater pollutants.

To address storm water runoff, the project will be programmed to follow the guidelines and procedures outlined in the 2016 Statewide Storm Water Management Plan. The project will not result in adverse impacts to water quality.

It is anticipated that the disturbed surface area (DSA) for the project will be less than 1 acre, therefore a Water Pollution Control Plan will be implemented for the project.

It has been determined that no long-term impacts to the water quality within or adjacent to the project area are anticipated if water quality issues are addressed during planning and design.

Avoidance, Minimization, and/or Mitigation Measures

To minimize impacts to water quality and storm water runoff for this project, the following measures will be implemented:

1. Standard precautionary procedures found in the Caltrans Stormwater Handbook – Construction Site Best Management Practices (March 2003) will be implemented. These precautionary procedures include, but are not limited to:
 - a) Temporary Soil Stabilization BMPs
 - b) Temporary Sediment Control
 - c) Tracking Control
 - d) Non-Storm Water Management
 - e) Waste Management Procedures
 - f) Materials Pollution Control BMPs

2.3 Biological Environment

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section (2.3.5).

Wetlands and other waters are discussed below in Section 2.3.2

Affected Environment

A Natural Environmental Study (NES) was completed for the project in May 2018. As a part of the study, a Biological Study Area (BSA) for the project was defined using the following criteria: the area that may be directly, indirectly, temporarily, or permanently impacted by construction and construction-related activities. The size of the BSA is approximately 3.57 acres and encompasses the Area of Potential Impact (API) that includes access routes and staging areas (Figure 2-1).

Natural communities found within the BSA are characterized using the naming conventions of *A Manual of California Vegetation* (Sawyer, et al 2009) and the *Preliminary Description of Terrestrial Natural Communities of California* (Holland 1986).

Vegetation communities observed within the BSA include: coyote brush scrub, arroyo willow thicket and ruderal vegetation.

There are also unvegetated and developed areas within the BSA. These areas include the SR-1 roadway and existing RSP on the creek banks.

The BSA does not occur within any federally designated critical habitat.

Coyote Brush Scrub

Coyote brush scrub is the dominate vegetation community within the BSA, encompassing approximately 1.7 acres of the BSA. This vegetation community most closely corresponds to the northern coyote bush scrub plant communities and the *Baccharis pilularis* Shrubland Alliance. This habitat is dominated by coyote brush (*Baccharis pilularis*), but also contains many non-native and invasive species, such as black mustard (*Brassica nigra*), intermixed at varying densities throughout the community.

Ruderal

The second most dominant vegetation within the BSA can be characterized as ruderal/disturbed, encompassing approximately 0.721 acre. This vegetation is found in the median between the northbound and southbound lanes of SR-1 and underneath the northern portion of the both the northbound and southbound bridges. These areas contain large patches of bare ground and weeds. Underneath the northbound bridge the ruderal area is dominated by Italian thistle (*Carduus pycnocephalus*), and poison hemlock (*Conium maculatum*) mixed with stinging nettle (*Urtica dioica*) and black mustard. Ruderal areas do not correspond with any categorized communities. Because these areas are subject to routine disturbance, ruderal areas are unlikely to support habitat for sensitive species.

Arroyo Willow Thicket

Arroyo willow thicket encompasses the smallest area within the BSA, approximately 0.098 acre. A narrow strip was observed underneath the southbound bridge between San Antonio Creek and the existing RSP. This area has an open canopy and lacks density and structural diversity. The understory is dominated by California blackberry (*Rubus ursinus*), but also includes stinging nettle, black mustard, and poison hemlock. A separate area of willow thick is found adjacent to the northbound bridge. This area also contains elderberry (*Sambucus spp*).

Environmental Consequences

Impact areas are a subset of the BSA and represented as the API, which was overlain with mapping and jurisdictional areas. The API includes areas of permanent and temporary impacts and assumes the maximum amount of disturbance/impact associated with construction of the project (including staging areas). Impacts to natural communities/habitats within the project API have been quantified based on ground disturbance and the estimated impacts are quantified in Table 1.

Table1 Impacts to Natural Communities

Community/Habitat	Permanent Impacts (acre)	Temporary Impacts (acre)
San Antonio Creek (Perennial Stream)	0.000	0.000
Arroyo willow thicket	0.000	0.000
Coyote brush scrub	0.028	0.747
Ruderal	0.000	0.009

Permanent impacts would result from installation of the sheet pile extension and placement of the new RSP. Temporary impacts will occur from construction equipment access and staging, as well as worker foot-traffic.

All Impacts, both temporary and permanent, would be limited to coyote brush scrub and ruderal habitat.

No impacts will occur to San Antonio Creek or in the arroyo willow thicket habitat.

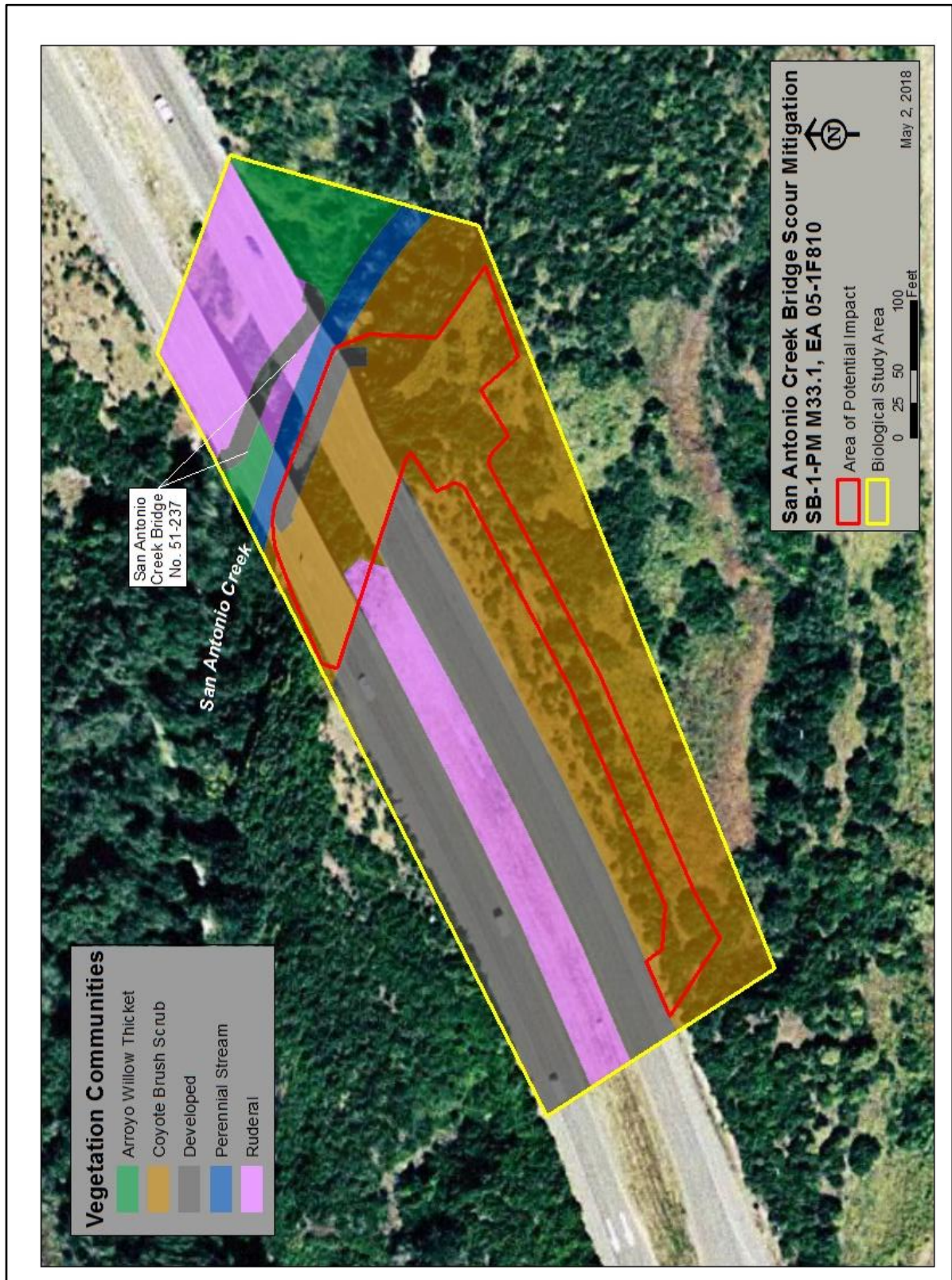


Figure 2-1 Biological Study Areas Map



Avoidance, Minimization, and/or Mitigation Measures

Environmentally Sensitive Areas (ESAs) will be identified on the project mapping along the maximum disturbance limits to minimize disturbance to natural communities. Special Provisions for the installation of ESA fencing will be included in the Construction Contract and will be identified on the project plans. Prior to the start of construction activities, all ESAs will be delineated in the field and will be approved by Caltrans Environmental.

All areas temporarily disturbed during construction will be restored back to pre-project conditions. Enhancement planting will be conducted on site and in-kind using native place species. Impacts will be mitigated by restoring or reestablishing riparian vegetation along the current degraded streambank and riparian zone. Temporary impacts will be mitigated at a minimum of a 1:1 ratio. Permanent impacts will be mitigated at a minimum of a 3:1 ratio. A one-year plant establishment period will be required.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under several laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purpose of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue Water Quality Certifications (WQC) for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for additional details.

Affected Environment

Information for this section came from the Natural Environment Study (NES) that was completed for the project in May 2018.

There are no federally protected wetlands identified within the project area.

Potential jurisdictional areas are present within the BSA; however, a formal delineation was not conducted because the project will avoid all aquatic features.

Approximately 0.119 acres of San Antonio Creek is potentially classified as USACE “other waters” within the BSA and falls under jurisdiction of USACE and RWQCB.

Approximately 0.866 acres of San Antonio Creek streambed and bank fall under the jurisdiction of CDFW within the BSA.

A summary of jurisdictional areas in the BSA is presented in Table 2 and is mapped on Figure 2-2, Jurisdictional Features.

Table 2 Jurisdictional Areas in the BSA

Agency	Jurisdictional Areas	Area in Square Feet	Area in Acres	Linear Feet
USACE	Perennial Stream	5,189	0.119	272
	Total USACE Jurisdiction	5,189	0.119	272
RWQCB	RWQCB Perennial Stream	5,189	0.119	272
	Total RWQCB Jurisdiction	5,189	0.119	272
CDFW	CDFW Streambed/Perennial Stream	5,189	0.119	272
	CDFW Streambank/Riparian	32,519	0.747	272
	Total CDFW Jurisdiction	37,708	0.866	272¹
¹ Distance from upstream to downstream. Totals are not a sum of individual jurisdiction types, but is the maximum distance among the two banks.				

Environmental Consequences

The project will result in both temporary and permanent impacts to CDFW jurisdictional areas. The project is not anticipated to impact any USACE or RWQCB jurisdictional areas.

Permanent impacts would result from installation of the sheet pile wall extension and placement of RSP. Approximately 0.028 acre of CDFW jurisdictional areas outside of the creek would be permanently impacted.

Temporary impacts will occur from construction equipment access and staging, as well as associated worker foot-traffic. Approximately 0.251 acre of CDFW jurisdictional areas would be temporarily impacted.

All potential jurisdictional impacts, both temporary and permanent, will be limited to coyote brush scrub. The project will have no impacts in San Antonio Creek or in the arroyo willow thicket habitat as these areas will be avoided.

The project is not anticipated to require any permits from USACE or RWQCB.

A Streambed Alteration Agreement will likely be required from CDFW.

Impact quantities for jurisdictional areas are included in Table 3.

Table 3 Estimated Impacts to Jurisdictional Areas

Jurisdictional Areas	Area Permanent Impacts	Linear feet Permanent Impacts	Area Temporary Impacts	Linear Feet Temporary Impacts ¹
USACE Other Waters (Perennial Stream)	0	0	0	0
Total USACE Impacts	0	0	0	0
RWQCB Perennial Stream	0	0	0	0
Total RWQCB Impacts	0	0	0	0
CDFW Streambed/Intermittent Drainage	0	0	0	0
CDFW Streambank	1,212 ft ² (0.028 acre)	59 feet	10,951 ft ² (0.251 acre)	130 feet
Total CDFW Impacts	1,212 ft² (0.028 acre)	59 feet	10,951 ft² (0.251 acre)	130 feet
¹ Measured along the longest bank across all jurisdictional areas				



Figure 2-2 Jurisdictional Features Map



Avoidance, Minimization, and/or Mitigation Measures

The project will impact potential CDFW and RWQCB jurisdictional areas within the API. The following avoidance and minimization measures will be implemented to reduce potential impacts to all jurisdictional areas resulting from the project:

1. San Antonio Creek will be completely avoided. No direct or indirect impacts will occur.
2. Prior to construction, Caltrans shall retain a qualified Biological Monitor to implement all biological pre-construction surveys, biological construction monitoring and reporting required for the project. The Biological Monitor must have demonstrated experience with all sensitive biological resources and species within the BSA and project vicinity. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on avoiding direct and indirect impacts to San Antonio Creek provided by the Biological Monitor prior to performing on-site work.
3. Prior to any ground-disturbing activities, ESA fencing shall be installed between the API and adjacent jurisdictional areas unless installation of fencing could potentially disturb San Antonio Creek. Caltrans-designated ESAs shall be noted on design plans and delineated in the field prior to the start of construction activities.
4. All project-related hazardous materials spills that occur within the project site shall be cleaned up immediately. Readily accessible spill prevention and cleanup materials shall be kept by the contractor on-site at all times during construction.
5. During construction, erosion control measures shall be implemented. Fiber rolls, and barriers shall be installed as needed. At a minimum, erosion controls shall be maintained by the contractor on a daily basis throughout the construction period.
6. During construction, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area and at least 65 feet from jurisdictional areas. The staging areas shall conform to Best Management Practices (BMPs). Equipment and vehicles shall be checked and maintained by the contractor on a daily basis to ensure proper operation and avoid potential leaks or spills.
7. During construction, Caltrans shall ensure that the spread or introduction of invasive noxious plant species will be avoided to the maximum extent possible. When practicable, invasive noxious plants in the project site shall be removed and properly disposed.
8. All areas temporarily disturbed during construction will be restored back to pre-project conditions. Enhancement planting will be conducted on-site and in-kind using native plant species. Plant restoration or reestablishment will be

implemented to prevent a net loss of streambank function and values. Temporary impacts will be mitigated at a minimum of a 1:1 ratio. Permanent impacts will be mitigated at a minimum of a 3:1 ratio.

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section (2.3.5) in this document for detailed information about these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern (SSC), USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at United States Code 16 (USC), Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), CA Public Resources Code, Sections 2100-21177.

Affected Environment

Information in this section is based on the NES prepared for this project in May 2018.

Surveys were conducted for special-status species within the BSA on May 31, 2017.

The studies found that potential habitat occurs within the BSA for several special-status plant species. The BSA supports suitable habitat for: California sawgrass (*Cladium californium*), San Bernardino aster (*Symphyotrichum defoliatum*), Gambel’s water cress (*Nasturtium gambelli*), and La Graciosa thistle (*Cirsium scariosum* var. *loncholepsi*).

However, California sawgrass and San Bernardino aster were not observed during timed botanical surveys. Further, the suitable habitat for all of these species within the BSA is limited to the San Antonio Creek or arroyo willow thicket habitat, which will be completely avoided.

Because of their threatened and/or endangered status, Gambel's water cress and La Graciosa thistle are discussed in Section 2.3.5, Threatened and Endangered Species.

A summary of the botanical survey results is presented on Table 4.

Table 4 Regional Plant Species of Concern

Common Name	Scientific Name	Federal / State / CRPR Status	Rationale
black-flowered figwort	<i>Scrophularia atrata</i>	-- / -- / CNPS 1B.2	- No closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub or riparian scrub within the BSA. In addition, no sand, diatomaceous shale or dune swales present. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
California sawgrass	<i>Cladium californicum</i>	-- / -- / CNPS 2B.2	- Portions of San Antonio Creek within the BSA have marsh characteristics; however, this area is outside the area of potential impact and will be avoided. - No further studies recommended.
dune larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	-- / -- / CNPS 1B.2	- No maritime chaparral or coastal dunes with sandy or rocky soils present within BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
Gambel's water cress	<i>Nasturtium gambelii</i>	FE / ST / CNPS 1B.1	- Portions of San Antonio Creek within the BSA have marsh characteristics; however, this area is outside the area of potential impact and will be avoided. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended. - Effects determination is the project will have no effect on Gambel's water cress.
Gaviota tarplant	<i>Deinandra increscens</i> ssp. <i>villosa</i>	FE / ST / CNPS 1B.1	- No coastal bluff, coastal scrub, valley or foothill grassland present within BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended. - Effects determination is the project will have no effect on Gaviota tarplant.
Hoover's bent grass	<i>Agrostis hooveri</i>	-- / -- / CNPS 1B.2	- No closed-cone coniferous forests, chaparral, cismontane woodland, valley and foothill grassland present within the BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.

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Common Name	Scientific Name	Federal / State / CRPR Status	Rationale
Kellogg's horkelia	<i>Horkelia cuneata</i> var. <i>sericea</i>	-- / -- / CNPS 1B.1	- No sandy or gravelly openings in closed-cone coniferous forests, chaparral, coastal dunes, or coastal scrub present within BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
La Graciosa thistle	<i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE / ST / CNPS 1B.1	- BSA contains small areas of riparian scrub and marsh conditions for San Antonio Creek within the BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended. - Effects determination is the project will have no effect on La Graciosa thistle.
La Purisima manzanita	<i>Arctostaphylos purissima</i>	-- / -- / CNPS 1B.1	- No sandy chaparral or coastal scrub present within BSA. - No <i>Arctostaphylos</i> species observed during surveys. - No further studies recommended.
Lompoc yerba santa	<i>Eriodictyon capitatum</i>	FE / SR / CNPS 1B.2	- No maritime chaparral or closed-cone coniferous forest present within BSA. - Effects determination is the project will have no effect on Lompoc yerba santa. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
mesa horkelia	<i>Horkelia cuneata</i> var. <i>puberula</i>	-- / -- / CNPS 1B.1	- No sandy or gravelly openings in maritime chaparral, coastal scrub or cismontane woodlands within the BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
San Bernardino aster	<i>Symphyotrichum defoliatum</i>	-- / -- / CNPS 1B.2	- Portions of San Antonio Creek within the BSA have marsh characteristics; however, this area is outside the area of potential impact and will be avoided. - No further studies recommended.
sand mesa manzanita	<i>Arctostaphylos rudis</i>	-- / -- / CNPS 1B.2	- No maritime chaparral or coastal scrub with sandy soils present within BSA. - No <i>Arctostaphylos</i> species observed during surveys. - No further studies recommended.

Common Name	Scientific Name	Federal / State / CRPR Status	Rationale
seaside bird's beak	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	-- / -- / CNPS 1B.1	- No cismontane woodland, closed-cone coniferous forest, coastal dunes, coastal scrub, or maritime chaparral present within BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
Southern curly-leaved monardella	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	-- / -- / CNPS 1B.2	- No chaparral, cismontane woodland, or openings in coastal dunes and dune scrub present within BSA. - Not observed during appropriate timed surveys. Not expected to occur in BSA. No further studies recommended.
Status Codes: Federal: FE = Federal Endangered FT = Federal Threatened State: SE = State Endangered ST = State Threatened SR = State Rare		California Rare Plant Rank (CRPR): Rank 1B = Plants Rare, Threatened, or Endangered in California and Elsewhere Rank 4 = Plants of Limited Distribution Threat Rank: .1 = Seriously threatened in CA (> 80% of occurrences threatened / high degree and immediacy of threat) .2 = Moderately threatened in CA (20-80% occurrences threatened / moderate degree and immediacy of threat) .3 = Not very threatened in CA (< 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)	

Environmental Consequences

No special-status species were observed within the BSA during botanical surveys and none are anticipated to occur or otherwise be impacted as a result of the project.

In addition, the project will avoid the San Antonio Creek and the arroyo willow thicket habitat.

As a result, the project is not anticipated to impact any special-status plant species.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will be implemented for this project:

1. San Antonio Creek and the associated arroyo willow thicket habitat will be completely avoided. No direct or indirect impacts will occur.
2. All employees, subcontractors, and contractor's representative on the project site shall receive a specific training on special-status plants species, and avoiding impacts to San Antonio Creek and the associated arroyo thicket habitat.

3. San Antonio Creek and the arroyo willow thicket habitat will be designated as an ESA, which shall be noted on project design plans.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern (SSC), and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

The NES (May 2018) provided information on special-status species that have the potential to occur or are known to occur within the BSA.

Ten (10) special-status species have the potential to occur within the BSA: unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), western pond turtle (*Actinemys marmorata*), American badger (*Taxidea taxus*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*) and Yuma myotis (*Myotis yumanensis*).

Table 5 provides a list of animal species that have the potential to occur within the project footprint and a summary of their survey findings.

This section will discuss special-status animal species that have the potential for presence and/or the potential to be impacted by the project.

Because of their threatened and/or endangered status, unarmored threespine stickleback, California red-legged frog and California tiger salamander are discussed in Section 2.3.5, Threatened and Endangered Species.

Although Southwestern willow flycatcher (*Empidonax traillii extimus*), Least Bell's vireo (*Vireo bellii pusillus*) and Southern California steelhead (Southern California ESU) (*Oncorhynchus mykiss irideus*) have no potential to occur within the BSA, they are also discussed in Section 2.3.5 due to their threatened and/or endangered status.

Table 5 Regional Animal Species of Concern

Common Name	Scientific Name	Federal / State / Other Status	Habitat Present/ Absent	Rationale
El Segundo blue butterfly	<i>Euphilotes battoides allyni</i>	FE / -- / --	A	- No seaciff buckwheat present within the BSA. - No further studies recommended. - Effects determination is the project will have no effect on El Segundo blue butterfly.
Lompoc grasshopper	<i>Trimerotropis occulens</i>	-- / -- / SA	A	- No pale gravelly and rocky ground habitat present within the BSA. - No further studies recommended.
monarch butterfly	<i>Danaus plexippus</i>	-- / -- / SA	A	- No wind-protected tree groves or milkweed present within the study area. - No further studies recommended.
vernal pool fairy shrimp (vernal pool branchiopods)	<i>Branchinecta lynchi</i>	FT / -- / --	A	- No suitable clear-water sandstone-depression pools, grassed swales, earth slumps, or basalt-flow depression pools present within the BSA. - No further studies recommended. - Effects determination is the project will have no effect on vernal pool fairy shrimp.
southern steelhead trout (Southern California ESU)	<i>Oncorhynchus mykiss irideus</i>	FE / -- / SSC, CH	A	- San Antonio Creek within the BSA lacks clear, cool water. In addition, the project will completely avoid impacts to San Antonio Creek. - The BSA does not occur in a designated critical habitat unit. Effects determination is the project will have no effect on Southern California steelhead DPS. - No further studies recommended.
unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE / SE, FP / --	HP,P	- Unarmored threespine stickleback are known to inhabit both the upper and lower reaches of San Antonio Creek. - The project will completely avoid San Antonio Creek. - Effects determination is the project will have no effect on unarmored threespine stickleback. No further studies recommended.

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Common Name	Scientific Name	Federal / State / Other Status	Habitat Present/ Absent	Rationale
California red-legged frog	<i>Rana draytonii</i>	FT / -- / SSC, CH	HP	- San Antonio Creek is potentially suitable aquatic habitat for California red-legged frog (CRLF); however, the project will completely avoid San Antonio Creek. - Arroyo willow thicket habitat is potentially suitable upland or migration habitat; however, the project will completely avoid San Antonio Creek. - Coyote brush scrub is marginally suitable upland habitat. - Not observed during surveys. - The effects determination is that the project will have no effect on CRLF. - Avoidance/ minimization measures included as a precaution.
California tiger salamander	<i>Ambystoma californiense</i>	FT/ ST / SSC	HP	- No suitable aquatic habitat in BSA because it lacks pools or ponds. - Coyote brush scrub is marginally suitable refuge habitat. - The effects determination is that the project will have no effect on California tiger salamander. - Avoidance/ minimization measures included as a precaution.
western spadefoot	<i>Spea hammondi</i>	-- / -- / SSC	A	- No vernal pool habitat present within or adjacent to the BSA. No valley or foothill hardwood woodlands present within BSA. - Not observed during surveys. - No further studies recommended.
coast horned lizard	<i>Phrynosoma blainvillii</i>	-- / -- / SSC	A	- No suitable coastal sage scrub, chaparral, open grasslands, coniferous forests, or woodland habitat present within the BSA. No sandy washes present. - Not observed during surveys. - No further studies recommended.
silvery legless lizard	<i>Anniella pulchra pulchra</i>	-- / -- / SSC	A	- No beach dunes, chaparral, pine-oak woodlands, desert scrub and stream terraces with native tree cover present within the BSA. - Not observed during surveys. - No further studies recommended.
western pond turtle	<i>Actinemys marmorata</i>	-- / -- / SSC	HP	- San Antonio Creek is potentially suitable habitat within the BSA; however, the project will completely avoid San Antonio Creek. - Not observed during surveys. - Avoidance/ minimization measures included as a precaution.

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Common Name	Scientific Name	Federal / State / Other Status	Habitat Present/ Absent	Rationale
Least bell's vireo	<i>Vireo bellii pusillus</i>	FE, CH / SE / --	A	- No dense and low shrubby vegetation, scrub oak, chaparral habitat, or mesquite brushlands present within the BSA. - Arroyo willow thickets within the BSA lack the density and structural diversity required for this species. - In addition, the project would completely avoid arroyo willow thicket habitat. - No critical habitat for this species in the BSA. - The BSA does not occur in a designated critical habitat unit. Effects determination is the project will have no effect on Least bell's vireo. - No further studies recommended.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, CH / SE / --	A	- No dense riparian vegetation within the BSA. - Arroyo willow thickets within the BSA lack the density, structural diversity and larger tree overstory required for this species. - In addition, the project would completely avoid arroyo willow thicket habitat. - No critical habitat for this species in the BSA. - The BSA does not occur in a designated critical habitat unit. Effects determination is the project will have no effect on southwestern willow flycatcher. - No further studies recommended.
American badger	<i>Taxidea taxus</i>	-- / -- / SSC	HP	- Coyote brush scrub provides potentially suitable habitat within BSA. - Not observed during surveys. - Avoidance/ minimization measures included as a precaution.
hoary bat	<i>Lasiurus cinereus</i>	-- / -- / SA	HP	- Medium trees within arroyo willow thicket habitat under the southbound bridge provide marginally suitable habitat because they lack heavy foliage. - The north and southbound bridges provide suitable night roosting habitat. - Evidence of night roosting (guano) was observed during surveys. - Avoidance/ minimization measures recommended.
pallid bat	<i>Antrozous pallidus</i>	-- / -- / SSC	HP	- Medium trees within arroyo willow thicket habitat under the southbound bridge provide marginally suitable habitat because they lack heavy foliage. - The north and southbound bridges provide suitable night roosting habitat. - Evidence of night roosting (guano) was observed during surveys. - Avoidance/ minimization measures recommended.

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Common Name	Scientific Name	Federal / State / Other Status	Habitat Present/Absent	Rationale
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	-- / -- / SSC	HP	• Medium trees within arroyo willow thicket habitat under the southbound bridge provide suitable habitat. • The north and southbound bridges provide suitable night roosting habitat. • Evidence of night roosting (guano) was observed during surveys. • Avoidance/ minimization measures recommended.
western red bat	<i>Lasiurus blossevillii</i>	-- / -- / SSC	HP	• Medium trees within arroyo willow thicket habitat under the southbound bridge provide suitable habitat. • The north and southbound bridges provide suitable night roosting habitat. • Evidence of night roosting (guano) was observed during surveys. • Avoidance/ minimization measures recommended.
Yuma myotis	<i>Myotis yumanensis</i>	-- / -- / SA	HP	• Medium trees within arroyo willow thicket habitat under the southbound bridge provide marginally suitable habitat because they lack heavy foliage. • Evidence of night roosting (guano) was observed during surveys. • Avoidance/ minimization measures recommended.
Status Codes: Federal: FE = Federal Endangered FT = Federal Threatened State: SE = State Endangered ST = State Threatened SR = State Rare Other: SA = <i>Special Animal</i> SSC = <i>Special Species of Concern</i>		Habitat Present/Absent Absent [A] -no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. Present [P] -the species is present. Critical Habitat [CH] – the project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.		

Western Pond Turtle

The western pond turtle is considered a California species of special concern.

Western pond turtles have been present in most Pacific slope drainages between the Oregon and Mexican borders. Pond turtles live where water persists year-round: in ponds, foothill streams or in broad washes near the coast. The ponds favored by turtles typically support emergent and floating vegetation such as cattails and algal mats. These turtles also seek locations to bask such as on logs, rocks or flat shorelines close to the edge of water.

No western pond turtles were observed in the BSA during surveys. There is a CNDDDB occurrence for western pond turtle along San Antonio Creek approximately one mile downstream of the BSA; however, the occurrence description notes of the location are unclear. The second closest CNDDDB occurrence is over 5 miles away and is noted as a museum collection with an unknown date.

Suitable habitat for western pond turtles is present at San Antonio Creek, although the potential for individuals to be present within the BSA is low due to minimal basking sites within the BSA.

Nesting Bird Species

Nesting bird species are addressed here as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures. Nesting birds are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503. Nesting bird species protected by these two regulatory laws have the potential to nest in habitats within the BSA.

No special-status bird species were observed during surveys, and no potential suitable habitats were identified within the BSA.

Common bird species observed in or near the BSA included black phoebe (*Sayornis nigricans*), acorn woodpecker (*Melanerpes formicivorus*), California scrub jay (*Aphelocoma californica*), mourning dove (*Zenaida macroura*), house finch (*Haemorrhous mexicanus*), turkey vulture (*Calthartes aura*) and cliff swallow (*Petrochelidon pyrrhonota*).

Many active cliff swallow nests on and in the bridge, were observed during the survey. While no active nests were observed within the arroyo willow thicket habitat during surveys, these areas do provide suitable nesting habitat for common bird species. The coyote brush scrub habitat within the BSA also provides marginal nesting habitat.

American Badger

The American badger is considered a California species of special concern.

The American badger is an uncommon, permanent resident found throughout most of the state of California, except in the northern North Coast region. The species is abundant in drier open stages of most shrub, forest and herbaceous habitats, with friable soils. American badgers are stocky, low-slung with distinctive white and black head markings, short legs and long claws adapted for digging. Their diets shift seasonally and yearly in response to availability of prey. American badgers dig burrows in friable soil for cover. They frequently reuse old burrows, although some may dig a new den each night. American badgers are non-migratory, and their homes range estimates vary geographically and seasonally.

No American badger or potential badger dens were observed during surveys of the project BSA. No dirt piles, prey remains, active burrows or other signs of badgers were observed within the BSA. The nearest CNDDB records of a live American badger were from 1990, approximately 3.7 miles south of the BSA. All other records in the vicinity are roadkill reports.

The BSA supports marginal habitat for American badger within the coyote brush scrub. There is a low potential of denning occurrence for American badger within the BSA.

Bats

Several species of bats currently listed as California species of special concern have the potential to be found within the BSA. Bat species are addressed here as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures.

Special status bat species for the region includes: hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillei*), and Yuma myotis (*Myotis yumanensis*).

Bridges frequently have structural features that are similar to natural bat roosts, and the large mass of bridges offers the thermal buffering that roosting bats require. In addition, bridges frequently serve to replace natural roosts in human altered/influenced landscapes. Night roosts are most commonly found in concrete girder bridges, where the girders create warm air pockets and the bridge deck temperature is typically warmer and more stable than ambient temperature.

San Antonio Creek Bridge was assessed for the potential of providing habitat for roosting bats. Signs of guano were observed during surveys, indicating the presence of night roosting under the bridge. The northbound and southbound bridges are cast-in-place concrete box girder bridges and lack concrete girders, joints and crevices that form suitable microclimates conducive to day roosting. The arroyo willow thicket

habitat under the southbound bridge also provides marginally suitable habitat for bat species.

Environmental Consequences

Western Pond Turtle

If western pond turtles are present within the BSA during construction, direct impacts will be avoided because no impacts will occur to San Antonio Creek. Indirect impacts could result from noise and disturbance associated with construction if individuals are present within the BSA.

The potential for indirect impacts to western pond turtle is anticipated to be low due to marginally suitable habitat found around the project site.

Nesting Bird Species

If active nests are present in the BSA, within the bridge or arroyo willow thicket habitat during construction, indirect impacts could result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors. The implementation of the avoidance and minimization measures such as pre-activity surveys and buffer areas will reduce the potential for adverse effects to nesting bird species. Direct impacts could occur if active nests are present within the coyote brush scrub during construction. In addition, the project will avoid the San Antonio Creek and the arroyo willow thicket habitat.

American Badger

If present during construction, American badgers could accidentally be injured or killed by construction equipment. Noise and disturbance associated with construction could adversely affect foraging and dispersal behaviors. The potential for adverse effects to American badger is estimated to be low.

Bats

No direct impacts to bats or bat habitat are anticipated to occur as a result of project activities because no work will occur on the bridges or within the arroyo willow thicket habitat. Indirect impacts could result from noise and disturbance associated with construction, which could also alter roosting behaviors. The implementation of avoidance and minimization measures will reduce the potential for adverse effects to roosting bat species.

Avoidance, Minimization, and/or Mitigation Measures

Western Pond Turtle

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representative on the project site shall receive a specific training on western pond turtle and avoiding direct and indirect impacts to San Antonio Creek. Training will be provided by the Biological Monitor prior to performing on-site work.
2. If western pond turtles are observed within San Antonio Creek during construction within the BSA, the contractor will contact the Caltrans District Biologist. The Biological Monitor will conduct a site visit and have the authority to stop work if construction is causing indirect impacts to individuals. The Biological Monitor shall determine an appropriate a buffer until the individual leave the BSA. The Biological Monitor will only relocate individuals outside of the BSA if relocation completely avoids direct and indirect impacts to San Antonio Creek.

Nesting Bird Species

The following avoidance and minimization measures are will be implemented:

1. Caltrans Standard Specifications for Bird Protection (SSP 14-6.03) will be included with the project's Plans and Specifications. In addition, if an active nest is found, a qualified biologist shall determine an appropriate buffer or monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided, or monitoring shall continue until a qualified biologist has determined that juveniles have fledged.
2. If feasible, construction should be scheduled to occur outside the nesting season to avoid direct and indirect impacts to nesting birds. If construction occurs during the nesting season (February 1 to September 31), swallow nesting shall be excluded from the bridge prior to and during construction either by active removal of unfinished nest or through the use of exclusion netting. All swallow exclusion measures shall be implemented with methods that completely avoid direct and indirect impacts to San Antonio Creek and the arroyo willow thicket habitat.
3. If construction occurs during the nesting season (February 1 to September 31), preconstruction nesting bird surveys will be conducted two weeks prior to the onset of construction activities by the Biological Monitor. If an active nest is found, the Biological Monitor shall determine an appropriate buffer and monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided until the Biological Monitor has determined that juveniles have fledged.

American Badger

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representatives on the project site shall receive an American badger specific training provided by the Biological Monitor prior to performing on-site work.
2. Within 30 days prior to initiation of site disturbance and/or construction, the Biological Monitor will conduct a pre-activity (i.e., pre-construction) survey for sensitive species that have the potential to occur within the project limits, including American badger and its associated dens. If pre-construction surveys reveal a potential den (based on size of opening and depth) during the pupping season (March – September), the burrow will be flagged and monitored to assure that it is not being used as a natal den. If an active natal den is discovered, no work would be allowed within a buffer determined appropriate by the Biological Monitor until the den is vacated. If an active den is discovered outside of the pupping season, work would be required to cease within a buffer determined appropriate by the Biological Monitor until the badger vacates – typically within 2 to 3 days, and the den would be destroyed to discourage the badger from returning.
3. During the site-disturbance and/or construction phase, any equipment or materials that contain holes with a diameter of 4 inches or greater stored overnight at the project site should be thoroughly inspected for trapped American badgers before the subject equipment or materials are subsequently used or moved in any way. If an American badger is found, work will stop and the Biological Monitor will be notified. Work may resume when the Biological Monitor has received authorization from the appropriate agency.
4. Prior to, during, and after the site-disturbance and/or construction phase, use of pesticides or herbicides should be in compliance with all federal, state, and local regulations. No rodenticides may be used, due to the risk to American badger.
5. During the site-disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures an American badger, or finds any such animal either dead, injured, or entrapped is required to report the incident immediately to the Biological Monitor (who will in turn contact CDFW). Caltrans shall insure that any threatened, endangered or protected species found dead or injured be turned over immediately to the CDFW for care, analysis, or disposition.
6. No firearms or pets shall be allowed on the project site.
7. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from the project site.

Bats

The following avoidance and minimization measures will be implemented:

1. Construction will be limited to daylight hours between sunrise and sunset, as defined by the U.S. Naval Observatory (<http://www.usno.navy.mil/USNO/astronomical-applications>).
2. If construction occurs during the bat maternity roosting season (February 15 to September 1), a bat roost survey shall be conducted by the Biological Monitor within seven (7) days prior to construction. If an active day roost is found, Caltrans shall coordinate with CDFW to determine an appropriate buffer based on the habits and needs of the species. Readily visible exclusion zones shall be established in areas where roosts must be avoided using ESA fencing, unless installation of fencing could potentially disturb San Antonio Creek. Work in the buffer area shall be avoided until the biological monitor has determined that roosting activity has ceased. Active bat maternity roost shall not be disturbed or destroyed at any time.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt,

pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

This section is based on information that was included in the Natural Environment Study (May 2018) prepared for the project.

During reconnaissance survey of the BSA, the following species were not observed: El Segundo blue butterfly (*Euphilotes battoides allyni*), vernal pool fairy shrimp (*Branchinecta lynchi*), Gambel's water cress (*Nasturtium gambelii*), La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), Lompoc yerba santa (*Eriodictyon capitatum*), Marsh sandwort (*Arenaria paludicola*), Southwestern willow flycatcher (*Empidonax traillii extimus*), and Least Bell's vireo (*Vireo bellii pusillus*) and Southern California steelhead (Southern California ESU) (*Oncorhynchus mykiss irideus*).

Although these species are known to occur in the region, investigations have determined that potentially suitable habitat is either lacking or is not present within the BSA.

A summary of all agency coordination conducted for this project is presented in Chapter 4, Comments and Coordination.

California Red-Legged Frog (CRLF)

The California red-legged frog (*Rana draytonii*) is a federally threatened species and California species of special concern. The CRLF historically ranged from Marin County southward to northern Baja California. Presently, Monterey, San Luis Obispo, and Santa Barbara counties support the largest remaining CRLF populations within California.

The CRLF are able to use a variety of areas, including aquatic, riparian and upland habitats. They prefer aquatic habitats with little or no flow and where water is at least

2.3 feet deep. Adult CRLF breeding sites need some form of emergent, submerged, floating, or edge vegetation to provide cover from predators and to provide structure for attachment of eggs.

The CRLF uses upland habitats for foraging, shelter and dispersal. Upland refuge may be natural (e.g., downed trees or logs) or manmade (e.g., drains, watering troughs, haystacks), and include small mammal burrows and moist leaf litter.

San Antonio Creek provides suitable breeding habitat for CRLF within the BSA, and the arroyo willow thicket habitat provides upland refuge and dispersal habitat. The coyote brush scrub also provides marginally suitable upland dispersal habitat. The closest known CNDDDB record of CRLF is approximately 3.25 miles south of the BSA (CNDDDB 2018). This is beyond the one-mile migration ranges of CRLF. However, there is a record of CRLF associated with San Antonio Creek approximately 8 miles downstream from the BSA and CRLF individuals could use San Antonio Creek as a migration corridor to reach the BSA.

California Tiger Salamander (CTS)

The California tiger salamander (*Ambystoma californiense*) is a state listed threatened species and the Santa Barbara County Distinct Population Segment (DPS) of CTS is a federally listed endangered species. The CTS are known only in California and occur in the Central Valley, Sierra foothills, Coast Ranges and inter-mountain valleys from near Petaluma and Sacramento in the north to Tulare and Santa Barbara counties in the south.

The CTS is a terrestrial salamander, and its typical upland habitat consists of ground burrows made by ground squirrels or other burrowing animals. During the breeding season, typically between November and January, CTS will seek shallow, often turbid, vernal pools and stock ponds as breeding habitat. Adult CTS enter breeding ponds during rain storms, breed and then return to their upland habitat, where they remain until the next breeding season.

One study conducted in Central California found that adult CTS may migrate as far as 1.30 miles between their upland and breeding habitat. Another study showed the average migration distance of CTS to be 0.36 miles and estimated that 95 percent of the CTS population occurred within 1.16 miles of their birth breeding pond.

There is no suitable breeding habitat for CTS within the BSA; however, the coyote brush scrub provides marginally suitable upland refuge habitat.

The closest CNDDDB record of a CTS is from a 1991 CNDDDB record of a seasonal pond 6.8 miles east of the BSA. The CNDDDB record notes that the number and life stage of individuals are unknown but the location appears to provide suitable breeding habitat (CNDDDB 2018). This seasonal pond is well beyond the 1.30-mile migration range of CTS.

Unarmored Threespine Stickleback (UTS)

The unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) is designated as a Fully Protected species by CDFW. Their main population in the San Antonio Creek watershed ranges from the creek's convergence with the Pacific Ocean to the Barka Slough.

Several forms of UTS may exist within a single stream or drainage as they have a unique characteristic of developing distinctive forms based upon the geography and physical conditions of their environment. They may have a resident freshwater or anadromous life history and are capable of completing their entire life cycle in fresh or salt water. Breeding occurs in late spring to summer in freshwater while the anadromous forms of UTS may breed earlier in the season after moving upstream. The UTS prefers shallow slow water along the edge with varying substrates. They prefer areas with adequate cover in the form of aquatic plants or overhanging brush to protect them from predators. In addition, UTS need clear water for nest building and food foraging.

From the Pacific Ocean to the Barka Slough, there are multiple UTS occurrences documented in the CNDDB between 1966 and 2010. Because this species is Fully Protected, specific surveys were not conducted to avoid any potential for take. While it is unknown if any individuals will be present within the portion of San Antonio Creek that flows through the BSA during construction, the presence of UTS is assumed.

Environmental Consequences

As potential suitable habitats are either lacking or not present within the BSA, the following species are not anticipated to be impacted by the project: El Segundo blue butterfly, vernal pool fairy shrimp, Gambel's water cress, La Graciosa thistle, Lompoc yerba santa, Marsh sandwort, Southwestern willow flycatcher, and Least Bell's vireo and Southern California steelhead.

In addition, avoidance and minimization measures will be implemented throughout the project limits to ensure that no potential impacts occur to these species.

The FESA Section 7 effect determination is that the project will have no effect on the following species: El Segundo blue butterfly, vernal pool fairy shrimp, Gambel's water cress, La Graciosa thistle, Lompoc yerba santa, Marsh sandwort, Southwestern willow flycatcher, and Least Bell's vireo and Southern California steelhead.

California Red-Legged Frog and California Tiger Salamander

These species are discussed together because they have similar habitat requirements, project-related impacts and avoidance and minimization measures.

No direct impacts or indirect impacts will occur to San Antonio Creek and therefore the project will not impact breeding habitat for CRLF. The project will not impact

breeding habitat for CTS as there is no suitable breeding habitat for CTS within the BSA.

No direct impacts or indirect impacts will occur to the arroyo willow thicket habitat. Temporary impacts will occur to 0.747 acre of marginally suitable upland CRLF and CTS habitat (coyote brush scrub) from construction equipment access and staging, as well as associated worker foot-traffic. Permanent impacts up to 0.028 acre of marginally suitable upland CRLF and CTS habitat (coyote brush scrub) would result from installation of the sheet pile extension and placement of RSP.

Avoidance and minimization measures will be implemented throughout the project limits to ensure that no impacts occur to individuals of these species.

In terms of the FESA Section 7 effect determination, the project will have no effect on CRLF or CTS based on the conclusion above.

Unarmored Threespine Stickleback (UTS)

No direct or indirect impacts will occur to San Antonio Creek, and therefore the project will not impact UTS or its associated habitat.

Avoidance measures will be implemented throughout the project limits to ensure that no impacts occur to individuals of this species. As a result, in terms of the FESA Section 7 Determination, the project will have no effect on UTS.

Avoidance, Minimization, and/or Mitigation Measures

The avoidance and minimization measures below will be implemented to avoid potential impacts to species that may occur in the BSA.

1. The project will completely avoid San Antonio Creek. No direct or indirect impacts will occur.
2. Prior to construction, Caltrans shall retain a qualified Biological Monitor to implement all biological pre-construction surveys, biological construction monitoring and reporting for the required project.
3. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on special status plants and avoiding impacts to San Antonio Creek and the associated arroyo willow thicket habitat. Training will be provided by the Biological Monitor prior to performing on-site work.
4. San Antonio Creek and the arroyo willow thicket habitat will be designated as Caltrans-define ESA and shall be noted on design plans.
5. Prior to any ground-disturbing activities, ESA fencing shall be installed to identify exclusion zones within the project API. Readily visible exclusion zones shall be established to limit potential impacts from project activities.

California Red-Legged Frog and California Tiger Salamander

These species are discussed together because they have similar habitat requirements, project-related impacts and avoidance and minimization measures.

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representative on the project site shall receive a CRLF and CTS specific training provided by the Biological Monitor prior to performing on-site work.
2. The Biological Monitor shall survey the project area no more than 48 hours before the onset of work activities. All excavation and vegetation removal shall be monitored by the Biological Monitor. The Biological Monitor shall be on site and monitoring during all new excavations and vegetation removal. In addition, the Biological Monitor will conduct a monitoring visit at a minimum of once per week throughout the entire length of construction and prepare reports documenting effectiveness of avoidance measures.
3. Prior to or during project activities, if any observations are made of CRLF or CTS, within or adjacent to the project limits, the contractor will contact the Caltrans District Biologist. All work within 500 feet of the protected amphibian species will stop until such time that Caltrans receives concurrence from USFWS (and from CDFW in the case of CTS) that it is appropriate to resume work. Similarly, if the Biological Monitor observes any CRLF or CTS all work within 500 feet of the protected amphibian species will stop until such time that Caltrans receives concurrence from USFWS (and from CDFW in the case of CTS) that it is appropriate to resume work.
4. During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
5. To control sedimentation during and after project completion, Caltrans shall implement BMPs outlined in the Caltrans Standard Specifications and Plans.
6. All refueling, maintenance and staging of equipment and vehicles shall occur at least 65 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat unless otherwise preapproved by the necessary agencies. Caltrans inspectors ensure contamination of habitat does not occur during operations. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
7. Habitat contours shall be returned to a natural configuration at the end of the project activities in all areas of temporary impact.

8. The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. ESAs shall be established to confine access routes and construction areas to the minimum area necessary to complete construction.
9. Water shall not be impounded in a manner that may attract CRLF or CTS.

Unarmored Threespine Stickleback (UTS)

The following avoidance and minimization measures will be implemented:

1. San Antonio Creek will be completely avoided. No direct or indirect impacts will occur to unarmored threespine stickleback individuals or habitat.
2. Vibratory hammer will be used during construction to avoid impacting unarmored threespine stickleback inhabiting the creek.
3. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on unarmored threespine stickleback and avoiding impacts to San Antonio Creek. The training will be provided by the Biological Monitor prior to performing on-site work.
4. San Antonio Creek will be designated as Caltrans-defined ESAs and shall be noted on design plans.
5. As previously mentioned, the Biological Monitor will conduct a monitoring visit at a minimum of once per week throughout the entire length of construction and prepare reports documenting effectiveness of avoidance measures.

2.3.6 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a project.

Affected Environment

A total of 11 plant species included in the online California Invasive Plant Council (Cal-IPC) Database (2018) were observed within the BSA (Table 6). Invasive species are most common in ruderal/disturbed areas along the edges of roadways, but are

present throughout the BSA in varying densities. Invasive plant species are scattered throughout the BSA.

Environmental Consequences

In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping.

All equipment and materials will be inspected for the presence of invasive species and cleaned if necessary. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Table 6 Plants Observed in the BSA Included in the California Invasive Plant Council's Invasive Plant Inventory

Scientific Name	Common Name	Cal-IPC Invasiveness Rating
<i>Avena barbata</i>	slender wild oat	Moderate
<i>Brassica nigra</i>	black mustard	Moderate
<i>Bromus diandrus</i>	ripgut brome	Moderate
<i>Bromus madritensis</i> ssp. <i>rubens</i>	foxtail brome	High
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate
<i>Centaurea melitensis</i>	toçalote	Moderate
<i>Conium maculatum</i>	poison hemlock	Moderate
<i>Fescuta perennis</i>	Italian ryegrass	Moderate
<i>Foeniculum vulgare</i>	fennel	High
<i>Geranium dissectum</i>	cutleaf geranium	Limited
<i>Nicotiana glauca</i>	tree tobacco	Moderate

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures will be implemented:

1. During construction, Caltrans will ensure that the spread or introduction of invasive noxious plant species will be avoided to the maximum extent possible.
2. When practicable, invasive noxious plants within the project site shall be removed and properly disposed.

2.4 Construction Impacts

The project will involve the installation of sheet pile walls to extend the existing erosion control measures that are protecting the bridge's footing and foundation. The sheet pile walls will be driven into the ground using a vibratory hammer. Additional RSP will also be placed behind the new sheet pile wall mimicking the design of the existing erosion control measure. A temporary construction access route will be constructed from the edge of the existing roadway to the project site. Construction staging and equipment storage will be located off-pavement and within Caltrans right-of-way. Additional staging and storage sites may be required and will utilize paved or previously disturbed areas. Access to the streambed will be restricted and no activities will occur in the creek.

Environmentally Sensitive Area fencing will be installed throughout the areas of the project to limit construction activities and protect environmental resources of concern unless installation of fencing could potentially disturb San Antonio Creek. Special Provisions of the installation of ESA fencing shall be included in the Construction Contract for this project and identified on the project plans. Any ESA will also be delineated in the field and will be approved by the project environmental division prior to the beginning of any construction activities, including equipment storage.

Aerially deposited lead (ADL) will not be an issue on this project since project-related soil disturbance is occurring well outside of the paved roadway.

Naturally occurring asbestos (NOA) does not occur in the project area and will not be an issue for the project.

The project will not impact any structures or facilities that would contain asbestos-containing materials (ACM) or lead-containing paint (LCP).

Affected Environment

Air Quality

Certain construction activities can be the source of temporary impacts to air quality. These potential impacts include dust-producing activities that occur during excavation, grading, equipment and material transport. Standard provisions included on all Caltrans projects would address potential emissions generated by construction equipment, grading activities and use of various construction materials.

Noise

While this project will not produce long-term noise impacts, there will be potential short-term noise impacts caused by construction activities.

Environmental Consequences

Air Quality

During construction, the project will generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses. Dust and odors during construction may cause occasional annoyance to the traveling public.

The project is located approximately 12 miles from the nearest city, and it is anticipated that dust or odors generated by project activities would not disturb any residences or businesses.

Noise

The project is not considered a Type I or Type II project, as it will not construct a highway on a new location, significantly change the alignment of the existing highway or involve construction of noise abatement on an existing highway. With no changes to the highway capacity or alignment, the project is not subject to Caltrans Traffic Noise Analysis Protocol.

Though it is not subject to noise analysis, this project may generate temporary construction-related noise impacts. Noise generated by construction activities will be intermittent and its intensity will vary depending on the construction activity.

The project is located in a rural area and is approximately 12 miles from the nearest city. Any temporary noise generated from the project would not disturb any homes or businesses in the area.

Avoidance, Minimization, and/or Mitigation Measures

Air Quality

Caltrans Standard Specification sections pertaining to dust control and dust palliative application are required for all construction contracts and would effectively reduce and control construction-emission impact. The provisions of Caltrans Standard Specification, Section 10-5 “Dust Control” and Section 14-9 “Air Pollution Control” require the contractor to comply with all California Air Resources Board and Santa Barbara County Air Pollution Control District rules, ordinances, regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.

Noise

The following control measures shall be implemented in order to minimize noise and vibration disturbances during periods of construction:

Equipment Noise Control

1. Use newer equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers, and shrouding, etc.).
2. Use construction methods or equipment that will provide the lowest level of noise and ground vibration impact, such as alternative low noise pile installation methods.
3. Turn off idling equipment.
4. Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receptors against excessive noise from construction activities. Noise barriers can be made of heavy plywood or moveable insulated sound blankets.

Administrative Measures

1. Implement a construction noise and vibration-monitoring program to limit the impacts.
2. Plan noisier operations during times of least sensitivity to receptors.
3. Keep noise levels relatively uniform and avoid impulsive noises.
4. Maintain good public relations with the community to minimize objections to the unavoidable construction impacts. Provide frequent activity update of all construction activities.

Application of abatement measures will reduce the construction impacts; however, a temporary increase in noise and vibration would likely occur during project construction.

Chapter 3 CEQA Evaluation

3.1 Determining Significance under CEQA

The project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Federal Highway Administration's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the main differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.



3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

AESTHETICS

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

CEQA Significance Determinations for Aesthetic

a) No Impact

The project area does not contain any scenic vista.

b) No Impact

The project area is not located within a scenic highway.

c) No Impact

The project will not affect the existing visual character or quality of the project area.

d) No Impact

The project will not involve the construction of any features that would generate light or glare.

AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

There are no agricultural farmlands within the project limits.

b) No Impact

There are no parcels under a Williamson Act contract within the project limits.

c) No Impact

There are no forest or timberlands within the project limits.

d) No Impact

There are no forest or timberlands within the project limits.

e) No Impact

The project will not require the conversion of farmland or forest land.

AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

CEQA Significance Determinations for Air Quality

a) No Impact

The project will not conflict with or obstruct implementation of the applicable air quality plan.

b) No Impact

The project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) No Impact

The project would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

d) Less Than Significant Impact

Temporary construction activities could generate fugitive dust and airborne pollutants from operation of construction equipment. With the implementation of Caltrans Standard Specification pertaining to dust control and dust palliative, impacts will be less than significant, and no mitigation is required.

e) No Impact

The project is not anticipated to produce objectionable odors that would affect a substantial number of people as the project is located in a rural area with no nearby communities. It is anticipated that temporary construction activities could generate odors from the operation of construction equipment.

BIOLOGICAL RESOURCES

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

CEQA Significance Determinations for Biological Resources

a) Less Than Significant

The project is not anticipated to create significant impact to any sensitive or special status species as their habitats will be avoided. The project is located in close proximity to special status species habitats and temporary construction activities could generate fugitive dust that may enter and settle on habitat areas. With the implementation of Caltrans Standard Specification pertaining to dust control and dust palliative, impacts will be less than significant, and no mitigation is required.

b) Less Than Significant Impact

The project will result in both temporary and permanent impacts to CDFW jurisdictional areas. The project is not anticipated to impact any USACE or RWQCB jurisdictional areas. The installation of the sheet pile wall extension and installation of new RSP will produce both permanent and temporary impacts to CDFW jurisdictional areas. A Streambed Alteration Agreement will likely be required from CDFW. All potential impacts would be along the banks of and upland from San Antonio Creek. The project will not involve any work in the creek bed and all arroyo willow thicket habitats will be avoided.

c) No Impact

There are no federally protected wetlands identified in the project impact area and activities in San Antonio Creek will be avoided.

d) No Impact

The project will not interfere with the movement of any resident or migratory wildlife species or interfere with their migratory corridors, and will avoid San Antonio Creek. Thus, the project will have no impacts to wildlife species, or their migratory corridors.

e) No Impact

The project does not conflict with any policies or ordinances protecting biological resources.

f) No Impact

The project does not conflict with any existing habitat conservation plan.

CULTURAL RESOURCES

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

CEQA Significance Determinations for Cultural Resources

a) Less Than Significant Impact

As further discussed in Chapter 2, the project has identified prehistoric archaeological resources contained within the entire APE of the project. Cultural studies have found that the archaeological deposits within the APE contribute to the Barka Slough Site (CA-SBA-1010) NRHP eligibility. It is anticipated that the boundary of CA-SBA-1010 will be updated to incorporate the entire APE of the project.

b) Less than Significant with Mitigation Incorporated

As further discussed in Chapter 2, the project has the potential to cause physical destruction or damage to portions of an archaeological resource within CA-SBA-1010. Cultural studies have revealed a relatively dense archaeological deposit within the project's study area. It has also been recommended that the archaeological deposit within the study area contributes to the NRHP eligibility of CA-SBA-1010.

Caltrans have determined a Finding of Adverse Effects for the San Antonio Creek Bridge Scour Mitigation Project and has obtained concurrence from SHPO.

Measures to avoid, minimize and or mitigate for Cultural resources may include, but are not limited to, the following:

1. Adverse effects to CA-SBA-1010 will be resolved through a Phase 3 data recovery. Procedures for fieldwork, laboratory analysis, and reporting, as well as procedures for archaeological monitoring, will be discussed in detail in the Archaeological Treatment Plan.
2. Phase 3 data recovery will be conducted within the project limits prior to project construction activities to prevent the potential loss of cultural data. Phase 3 data recovery may include, but is not limited to, the following activities:
 - a. Surface investigation, shovel test pits, core sampling, block excavation, trenching, and remote sensing.
 - b. Material recordation, recovery, collection and analysis.
 - c. All recovered cultural materials will be curated at an appropriate curation facility.
 - d. Public distribution and/or outreach of cultural information obtained from analysis of data recovery efforts.
3. The MOA was obtained after consultation with Native American representatives and SHPO to implement appropriate mitigation measures for CA-SBA-1010. The MOA requires that an Archaeological Treatment Plan be implemented for the project. If changes to the project's Archaeological Treatment Plan or APE are necessary, the MOA may require revisions and approval by SHPO. Project activities that may adversely affect cultural resources are not allowable until completion of fieldwork that is prescribed in the Archaeological Treatment Plan.

Yearly reports documenting the fulfillment of commitments outlined in the MOA will be submitted to the SHPO.

4. Establishing environmentally sensitive areas (ESA) within the project limits to minimize any potential impacts to Cultural resources.
5. Monitoring by a qualified archaeologist and Native American tribal representative will be required during the archaeological investigation and during project construction.
6. During construction, activities that will involve ground disturbance will require the presence of the archaeological and Native American monitors.
7. If significant cultural materials as encountered during project-related activities, it may be necessary to temporarily divert work away from the location until cultural materials can be properly assessed, documented, and/or recovered.
8. If significant cultural materials are encountered during project-related activities and are either documented or recovered, a more formal and extensive report may be required.
9. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
10. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 5 Environmental Branch staff, so that they may work with the MLD on the respectful treatment and disposition of the remains.

c) No Impact

The project is not anticipated to encounter paleontological resources within the project limits.

d) No Impact

Although the limits of the project are partially within the mapped boundary of CA-SBA-1010, the discovery of human remains is not anticipated.

GEOLOGY AND SOILS

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

CEQA Significance Determinations for Geology and Soils

a) No Impact

The project will not expose people or structures to potential substantial adverse effects.

i) No Impact

The project is not located on a fault line and no known fault lines are present in the project area.

ii) No Impact

The project will drive sheet piles into the ground and will not be visible from the surface.

iii) Less Than Significant

The project area is located along the banks of San Antonio creek and could potentially be affected by strong seismic ground shaking. The project intends to stabilize the creek banks.

iv) Less Than Significant

The project is located along the banks of San Antonio creek, which exhibits signs of erosion and bank failure. The project intends to stabilize the creek bank to reduce the potential for bank failure.

b) No Impact

The project will not result in substantial soil erosion or loss of topsoil. The project is intended to reduce erosion on the creek bank from bridge scour.

c) No Impact

The project is not anticipated to induce unstable soil. The project is located on an eroding creek bank and intends to prevent the creek bank from further scouring.

d) No Impact

The project is not located on expansive soils.

e) No Impact

The project will not involve the installation of septic tanks or alternative water disposal systems.

GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gas?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.			

HAZARDS AND HAZARDOUS MATERIALS

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

CEQA Significance Determinations for Hazards and Hazardous Materials

a) No Impact

The project would not be involved in the transportation, use, or disposal of hazardous materials.

b) No Impact

The project would not create a significant hazard to the public or the environment through upset and accident conditions involving the release of hazardous materials.

c) No Impact

The project is not located within one mile of an existing or proposed school.

d) No Impact

The project is not located on a site which is included on a list of hazardous materials sites.

e) No Impact

The project is not located within two miles of an existing public airport.

f) No Impact

The project is not located within the vicinity of a private airstrip.

g) No Impact

The project will not impair or interfere with emergency response of emergency evacuation plan as the project site is located outside of the road's travel way.

h) No Impact

The project will not expose people or structures to a significant risk involving wildland fires as the project area is not adjacent to urbanized areas and residences.

HYDROLOGY AND WATER QUALITY

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

CEQA Significance Determinations for Hydrology and Water Quality

a) No Impact

The project will not violate any water quality standards or waste discharge requirements as appropriate BMPS will be employed during project construction.

b) No Impact

The project is not anticipated to alter existing groundwater supplies.

c) No Impact

The project will not substantially alter the existing drainage pattern of the area in any manner that could result in substantial erosion or siltation. The intent of the project is to prevent further erosion of the existing creek bank and protect the bridge abutments.

d) No Impact

The project will not result in substantial increase in the rate of surface runoff in a manner which would result in flooding on- or off-site.

e) No Impact

The project will not create or contribute additional runoff water to existing drainage systems and would not result in additional sources of polluted runoff.

f) No Impact

The project will not degrade water quality.

g) No Impact

The project will not place any housing within a 100-year flood hazard area.

h) No Impact

The project is not located within a 100-year flood hazard area.

i) No Impact

The project will not expose people or structures to a significant risk of loss, injury, or death involving flooding.

j) No Impact

The project will not be inundated by seiche, tsunamis, or mudflow.

LAND USE AND PLANNING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

CEQA Significance Determinations for Land Use and Planning

a) No Impact

The project is not located within an established community.

b) No Impact

The project will not conflict with any applicable land use plan, policy, or regulation.

c) No Impact

The project will not conflict with any applicable habitat conservation plan or natural community conservation plan.

MINERAL RESOURCES

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

CEQA Significance Determinations for Mineral Resources

a) No Impact

The project will not result in the loss of a known mineral source that is of value to the region or its residents.

b) No Impact

The project will not result in the loss of a locally important mineral resource recovery site.

NOISE

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

CEQA Significance Determinations for Noise

a) No Impact

The project will not expose persons to noise levels in excess of established standards as no receptors are located adjacent to the project area.

b) No Impact

The project will not expose persons to excessive groundborne vibration or groundborne noise as no receptors are located adjacent to the project area.

c) No Impact

The project will not permanently increase ambient noise levels in the project vicinity above existing levels after project completion.

d) Less Than Significant Impact

The project will result in temporary or periodic increase in ambient noise levels in the project vicinity as a result of construction activities. With the implementation of Caltrans Standard Specifications pertaining to noise abatement, impacts will be less than significant, and no mitigation is required.

e) No Impact

The project is not located within two miles of a public airport.

f) No Impact

The project is not within the vicinity of a private airstrip.

POPULATION AND HOUSING

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

CEQA Significance Determinations for Population and Housing

a) No Impact

The project will not induce substantial population growth in an area, either directly or indirectly.

b) No Impact

The project will not displace existing housing as there are no housing facilities near the project area.

c) No Impact

The project will not displace any people as no residences are close to the project area.

PUBLIC SERVICES

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

CEQA Significance Determinations for Public Services

a) No Impact

The project will not disrupt emergency services response time or disrupt access to public facilities as the project will occur outside off the roadway.

RECREATION

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

CEQA Significance Determinations for Recreation

a) No Impact

The project will not increase the use of existing parks or recreational facilities in the region.

b) No Impact

The project will not involve the construction or expansion of recreational facilities.

TRANSPORTATION/TRAFFIC

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

CEQA Significance Determinations for Transportation/Traffic

a) No Impact

The project will not conflict with any applicable plan, ordinance or policy establishing measures of effectiveness for the performance of transportation systems.

b) No Impact

The project will not conflict with any applicable congestion management program designated for roads or highways.

c) No Impact

The project will not result in a change in air traffic patterns.

d) No Impact

The project will not substantially increase hazards due to a design feature or incompatible uses.

e) No Impact

The project will not result in inadequate emergency access as the project will not alter existing access routes.

f) No Impact

The project will not conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

CEQA Significance Determinations for Tribal Cultural Resources

a, b) Less Than Significant with Mitigation Incorporated

The Barka Slough Site (CA-SBA-1010) is eligible for the NRHP and the relatively dense archaeological deposits found within the project's study area contribute to CA-SBA-1010 NRHP eligibility under Criterion D.

Native American consultation has been carried out as part of the cultural studies.

As further discussed in Chapter 2, the project has the potential to cause physical destruction or damage to portions of an archaeological resource within CA-SBA-1010.

Caltrans has determined a Finding of Adverse Effects for the San Antonio Creek Bridge Scour Mitigation Project and has obtained concurrence from SHPO.

After the potential project effects have been evaluated, Caltrans recommends that the appropriate treatment measures be implemented to fulfill Section 106 obligations.

The following measures will be implemented to mitigate the impacts to cultural resources as a result of the project:

1. Adverse effects to CA-SBA-1010 will be resolved through a Phase 3 data recovery. Procedures for fieldwork, laboratory analysis, and reporting, as well as procedures for archaeological monitoring, will be discussed in detail in the Archaeological Treatment Plan.
2. Phase 3 data recovery will be conducted within the project limits prior to project construction activities to prevent the potential loss of cultural data. Phase 3 data recovery may include, but is not limited to, the following activities:
 - a. Surface investigation, shovel test pits, core sampling, block excavation, trenching, and remote sensing.
 - b. Material recordation, recovery, collection and analysis.
 - c. All recovered cultural materials will be curated at an appropriate curation facility.
 - d. Public distribution and/or outreach of cultural information obtained from analysis of data recovery efforts.
3. The MOA was obtained after consultation with Native American representatives and SHPO to implement appropriate mitigation measures for CA-SBA-1010. The MOA requires that an Archaeological Treatment Plan be implemented for the project. If changes to the project's Archaeological Treatment Plan or APE are necessary, the MOA may require revisions and approval by SHPO. Project activities that may adversely affect cultural resources are not allowable until completion of fieldwork that is prescribed in the Archaeological Treatment Plan. Yearly reports documenting the fulfillment of commitments outlined in the MOA will be submitted to the SHPO.

4. Establishing environmentally sensitive areas (ESA) within the project limits to minimize any potential impacts to Cultural resources.
5. Monitoring by a qualified archaeologist and Native American tribal representative will be required during the archaeological investigation and during project construction.
6. During construction, activities that will involve ground disturbance will require the presence of the archaeological and Native American monitors.
7. If significant cultural materials are encountered during project-related activities, it may be necessary to temporarily divert work away from the location until cultural materials can be properly assessed, documented, and/or recovered.
8. If significant cultural materials are encountered during project-related activities and are either documented or recovered, a more formal and extensive report may be required.
9. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
10. Discovery of human remains is not anticipated. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact District 5 Environmental Branch staff, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

UTILITIES AND SERVICE SYSTEMS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

CEQA Significance Determinations for Utilities and Service Systems

a) No Impact

The project will not generate wastewater that would exceed regional wastewater treatment requirements.

b) No Impact

The project will not lead to the construction or modifications of water or wastewater facilities.

c) No Impact

The project will not involve the construction of new storm water drainage facilities or the expansion of existing facilities.

d) No Impact

The project will not require additional water supplies.

e) No Impact

The project will not alter existing wastewater capacity.

f) No Impact

Solid waste generated by the project is anticipated to be transported to a disposal site with appropriate facilities to accommodate the waste materials.

g) No Impact

The project will comply with federal, state, and local statutes and regulations related to solid waste.

MANDATORY FINDINGS OF SIGNIFICANCE

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant with Mitigation Incorporated

The project is not anticipated to degrade the quality of the environment of any wildlife species. The project includes measures that ensure no work will occur in San Antonio Creek to avoid potential impacts to the unarmored threespine stickleback and its critical habitat.

As discussed in Chapter 2, the project is anticipated to produce impacts to existing cultural deposits found within the project area.

Caltrans has determined a Finding of Adverse Effects for the San Antonio Creek Bridge Scour Mitigation Project and has obtained concurrence from SHPO.

As further discussed in Chapter 2, the implementation of appropriate mitigation and avoidance measures to the project is anticipated to produce less than significant impacts to cultural resources.

b) No Impact

The project is not anticipated to produce any cumulative impacts. The project is limited to only improving the existing erosion control measure and with the appropriate measures (e.g., ESA) in place during construction, project-related impacts will be limited within the project area.

c) No Impact

The project is not anticipated to have any environmental effects that may cause substantial adverse effects on human beings, either directly or indirectly. The intent of the project is to prevent further scouring of the existing bridge abutments and ensure the bridge will continue to operate safely to serve the traveling public.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.⁴ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.⁵ The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” Greenhouse gas mitigation covers activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

⁴ <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

⁵ <https://www.arb.ca.gov/cc/inventory/data/data.htm>

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.⁶

This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”⁷ Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare.

⁶ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

⁷ <https://www.sustainablehighways.dot.gov/overview.aspx>

Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010⁸ and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.⁹

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

⁸ <https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy>

⁹ <http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256> and <https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e). Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, (SB 32) Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. The second updated plan, California's 2017 Climate Change discussion draft of an updated Scoping Plan Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, ARB released the GHG inventory for California.¹⁰ ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3.1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO₂e.¹¹ The 2018 edition of the GHG emissions inventory (released July 2018) found total California emissions of 429 MMTCO₂e for 2016.

¹⁰ 2018 Edition of the GHG Emission Inventory Released (July 2018).
<https://www.arb.ca.gov/cc/inventory/data/data.htm>

¹¹ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

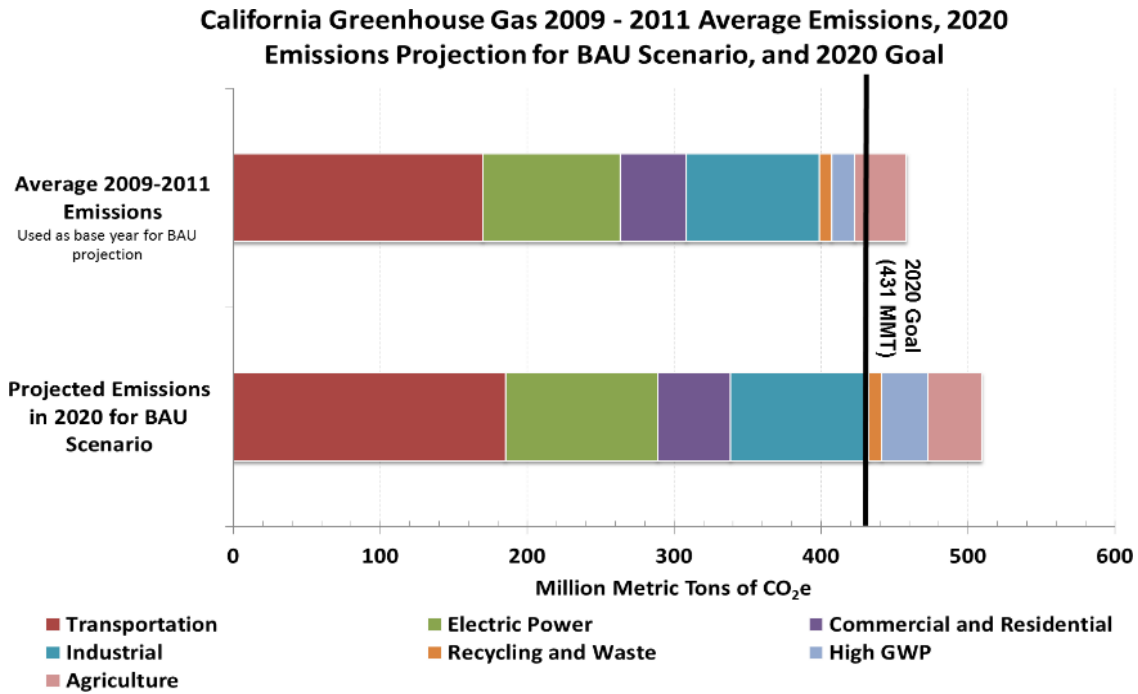


Figure 3-1 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO₂e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO₂e.

3.3.1 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Section 15064(h)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and probably future project to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

Operational Emissions

This project would extend the existing erosion control measure upstream to prevent further scouring of the bridge footings. The project would not affect the existing bridge geometry or the existing roadway geometry. The operational GHG emissions are not expected to change from existing condition as a result of the project.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions, modeled as carbon dioxide equivalent (CO₂e), was estimated using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model, version 8.1.0. The project is scheduled to take approximately 40 working days to complete construction and the estimated CO₂e emissions is 1.19 metric tons.

All construction contracts include Caltrans Standard Specifications that require compliance with all ARB and local air district rules, regulations, ordinances, and statutes, some of which can contribute to reducing construction GHG emissions.

3.3.2 California Environmental Quality Act Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target (Figure 3-2). These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.



Figure 3-2 The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands

have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

Through coordination with the PDT, the following measures will be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from project activities:

1. The project will re-vegetate all disturbed soil areas following completion of construction. Landscaping reduces surface warming and through photosynthesis, removes carbon dioxide from the atmosphere.
2. According to Caltrans's Standard of Specifications, the contractor must comply with all local Air Pollution Control District rules, ordinances, and regulation in regard to air quality.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011,¹² outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience

¹² <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”¹³

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).¹⁴ This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.¹⁵

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high-water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)¹⁶ was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land

¹³ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹⁴ <https://www.fhwa.dot.gov/legisregs/directives/orders/5520.cfm>

¹⁵ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

¹⁶ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 2009),¹⁷ which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided “guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California,” specifically, “information and recommendations to enhance consistency across agencies in their development of approaches to SLR.”¹⁸

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

¹⁷ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

¹⁸ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/>

Chapter 4 **Comments and Coordination**

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis required, potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation for this project has been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, and so on. Public participation will be sought through the release and review of this Initial Study with Mitigated Negative Declaration and Environmental Assessment. This chapter summarizes the results of Caltrans efforts to identify, address, and resolve project-related issues through early and continuing coordination.

Public Circulation

The Initial Study with Proposed Mitigated Negative Declaration and Environmental Assessment with Proposed Finding of No Significant Impact was circulated for public review and comment from October 19, 2018 to November 19, 2018. A Notice of Intent to Adopt a Mitigated Negative Declaration, and Opportunity for a Public Hearing was published in the Santa Barbara News-Press on Friday, October 19, 2018. The Notice of Intent and Opportunity for a Public Hearing was mailed to a list of stakeholders that included both government agencies and private citizen groups who occupy and have interest in the project area. All comments received during the circulation period and their responses are provided in Appendix D, Comments and Responses.

Cultural Resources Coordination

Native American Coordination

Interested Native American representatives included individuals and groups identified by the Native American Heritage Commission list as well as individuals who have past involvement in archaeological studies within the boundaries of the CA-SBA-1010 and sites within the immediate vicinity of the project.

- A request for a search of the Sacred Lands Files (SLF) was sent to the Native American Heritage Commission on March 3, 2017. The NAHC did not comment on the results of the SLF search, but instead provided a list of Native American contacts with whom Caltrans should consult about the project.
- During the initial stages of the preparation of the HPSR, Native American consultation was initiated with local Chumash individuals and groups. Consultation with interested Native American representatives included exchanging letters (including formal AB52/Section 106 consultation letters) and telephone calls, sending copies of cultural resource reports, preparing an

Extended Phase 1 proposal, holding meetings and field reviews, and ensuring that Native American monitors were present during field excavations. Representative letters documenting the consultation are attached to the HPSR. Interested Native American representatives included individuals and groups identified by the Native American Heritage Commission (NAHC) in a list dated March 3, 2017, as well as individuals who have past involvement in archaeological studies within the boundaries of CA-SBA-1010 and sites within the immediate vicinity of the project.

- On January 2017, Caltrans initiated consultation by sending an AB52/Section 106 letter to members of the Chumash community asking if they would like to be consulted. The letter provided a description of the project and the initial results of previous studies.
- The next phase of consultation entailed sending copies of the draft archaeological Extended Phase 1 (XP1) proposal and analysis of locations with sensitivity for buried archaeological deposits (November 17, 2017) for their review. This second letter also advised the consulting group that a project meeting and field review would be held prior to initiating the XP1 effort. After the proposal was sent, a follow-up call ensured receipt of the document, answered initial questions, and provided an opportunity to propose dates for a field review meeting. All individuals on the consultation list were called, and in some cases, they provided additional information on sites within the general area.
- On August 15, 2017, a project field meeting and information gathering were done on site, with members of the Chumash community and Vandenberg AFB 30th Civil Engineer Squadron archaeologist Chris Ryan, and Applied Earthworks, Inc (Æ). Chumash representative Freddie Romero and Michael Wyatt attended and discussed the project, alternatives, and studies conducted to date. Also, during the meeting, we received verbal comments on the testing proposal and additional information on sites and studies that are adjacent to the current project area. All participants noted the importance of testing for potential buried archaeological deposits at the identification stage. The discussion also addressed the need for Native American monitors during the archaeological studies and ground-disturbing activities. All consultants were concerned about the designation of the Most Likely Descendant (MLD), as multiple individuals and groups have ties to specific locations in Santa Barbara County. It was agreed that the Santa Ynez Band of Mission Indians would be directly involved in these efforts as they were involved in past excavations at this site and adjacent work within the immediate area. In anticipation of the possibility of encountering human remains Caltrans should have a formal burial agreement or designate a MLD prior to fieldwork.
- During the Extended Phase 1/Phase II archaeological excavations, Michael Wyatt performed the duties of monitoring at all test locations. Daily monitoring record forms were completed and are in the project archaeological file.

- On April 1, 2017, a letter detailing the excavations and recommended National Register findings and copies of the supporting draft evaluation report (March 2017) were sent to all members of the Chumash consultation group and Chris Ryan (Vandenberg Air Force Base).
- Upon completion of the final archaeological evaluation report in April 2018, all individuals and groups in the consultation group received a letter summarizing the study results and a copy of the final report (April 2018).
- On August 18, 2018, copies of the SHPO concurrence and CSA-SBA-1010 Treatment Plan/MOA were distributed to the Chumash consultation group for review.

State Historic Preservation Office (SHPO) Coordination

- On June 21, 2018, Caltrans submitted a letter and Finding of Adverse Effect documentation to SHPO, initiating consultation.
- On August 1, 2018, a letter was obtained from SHPO, stating they concurred with Caltrans Finding of Adverse Effects for the proposed project.
- On May 10, 2019, SHPO approved the Memorandum of Agreement (MOA).

Vandenberg Air Force Base Coordination

- Caltrans consulted with Vandenberg AFB 30th Civil Engineer Squadron archaeologist Chris Ryan, who carried out excavations for archaeological excavations within the immediate vicinity of the project area. Mr. Ryan provided valuable information about the systematic excavations downstream from the current project area for the San Antonio Creek Stream Restoration Project located immediately west of the current APE and provided his expertise to Caltrans and Applied Earthworks, Inc. by reviewing and providing comments both in the field and on the draft version of the Extended Phase I/Archaeological Evaluation Report.

Biological Resource Coordination

- October 23, 2014: An early coordination meeting was held between Caltrans and CDFW to discuss the project during the early scoping phase. Items discussed included the Fully Protected unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), sediment prevention, bat avoidance, and construction methods. The meeting was informational in nature and no definitive decisions or conclusions were made; however, both agencies emphasized the need for complete avoidance of San Antonio Creek and unarmored threespine stickleback.
- April 30, 2018: Karen Holmes (Caltrans District 5 Biologist) submitted an online request through the USFWS IPaC website for an official USFWS species list for the project area. The official species list was received the same

day. An official species list was also requested and received from NMFS on this date.

- November 19, 2018: CDFW submitted comments during the Public Circulation Period of the Draft Environmental Document. Responses to CDFW comments are discussed in the Comments and Responses Section, Appendix D.

Hydraulic Study Coordination

- November 27, 2018: Hydraulic Specialist obtained Flood Insurance Rate Map (FIRM).
- January 10, 2019: Hydraulic Specialist obtained Flood Inundation Report (2016) from Vandenberg Air Force Base.

Chapter 5 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

- Butler, Hannah. Environmental Planner. B.S., Environmental Management and Protection, California Polytechnic University, San Luis Obispo. Nine months of environmental planning experience. Contribution: Prepared the Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact
- Carr, Robert. Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic University, San Luis Obispo; 20 years of experience preparing Visual Impact Assessments. Contribution: Visual Impact Study
- Erchul, Benedict. Transportation Engineer. B.S., Civil Engineering, California Polytechnic University, San Luis Obispo; 13 years of experience in hydraulics and hydrology. Contribution: Floodplain and Fish Passage Evaluation.
- Fowler, Matt. Senior Environmental Planner. B.A., Geographic Analysis, San Diego State University, 18 years of experience in environmental planning. Contribution: Oversight of the Initial Study.
- Geramaldi. Associate Environmental Planner (Generalist). B.S. Environmental Geography, California Polytechnic State University, Pomona; 3 years of environmental planning experience. Contribution: Coordinated environmental process, prepared the Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact
- Haydu, Damon M. Associate Environmental Planner (Archaeology). M.A., Cultural Resources Management, Sonoma State University, Rohnert Park; 25 years of experience in all phases of cultural resource management. Contribution: Historic Property Survey Report (HPSR), Finding of Effects Document (FOE).
- Hoffmann, Yvonne. Associate Environmental Planner, B.S. Natural Resources Planning, Humboldt State University; 18 years of environmental planning and documentation, and 12 years of city planning. Contribution: NEPA Quality Control Reviewer.
- Holmes, Karen. Senior Environmental Planner. B.A., Environmental Studies/Biogeography, University of California, Los Angeles; 12 years of experience in environmental planning and analysis, biology, and regulatory permitting. Contribution: Natural Environmental Study (NES).

Kloth, Joel. Engineering Geologist. B.S., Geology, California Lutheran University; more than 30 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Initial Site Assessment.

Kozub, Lindsay. Associate Environmental Planner (Architectural Historian). M.A., History/Cultural Resource Management, Colorado State University; B.A., History; B.S., Business; 9 years of experience in historical research and analysis, historic preservation, and cultural resource management. Contribution: Historic Property Survey Report (HPSR).

Leyva, Isaac. Engineering Geologist. B.S., Geology, California State University, Bakersfield; A.S., Cuesta College, San Luis Obispo; 20 years of experience in petroleum geology, environmental, geotechnical engineering. Contribution: Paleontology Technical Report, Water Quality Assessment.

Timofei, Vladimir. Transportation Engineer M.S., Civil Engineering, California State University Fullerton, 18 years of experience preparing Air, Noise and Water Studies. Contribution: Air and Noise.

Vierra, Rochelle. Senior Transportation Surveyor. Professional Land Surveyor (PLS), Project Management Professional (PMP); 30 years of experience in Land Surveying and Project Management. Contribution: Project Manager

Chapter 6 Distribution List

Santa Barbara County Planning Office
123 East Anapamu Street
Santa Barbara, CA 93101

Santa Barbara Public Library – Buellton Branch
140 West Highway 246
Buellton, CA 93427

Lompoc Public Library
501 East North Avenue
Lompoc, CA 93436

Santa Maria Public Library
421 South McClelland Street
Santa Maria, CA 93454

California Department of Fish and Wildlife
3883 Ruffin Road
San Diego, CA 92123

Regional Water Quality Control Board – Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura CA, 93003-7726

Chris Ryan
30th Civil Engineer Squadron
Vandenberg Air Force Base
747 Nebraska Ave
Vandenberg AFB, CA 93437



Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
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*Making Conservation
a California Way of Life.*

April 2018

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

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To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.


LAURIE BERMAN
Director

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*



Appendix B Avoidance, Minimization and/or Mitigation Summary

Below is the summary of the avoidance, minimization and/or mitigation measures to be incorporated into the project.

Cultural Measures

The following measures will be implemented to mitigate the impacts to cultural resources as a result of the project:

1. Adverse effects to CA-SBA-1010 will be resolved through a Phase 3 data recovery. Procedures for fieldwork, laboratory analysis, and reporting, as well as procedures for archaeological monitoring, will be discussed in detail in the Archaeological Treatment Plan.
2. Phase 3 data recovery will be conducted within the project limits prior to project construction activities to prevent the potential loss of cultural data. Phase 3 data recovery may include, but is not limited to, the following activities:
 - a) Surface investigation, shovel test pits, core sampling, block excavation, trenching, and remote sensing.
 - b) Material recordation, recovery, collection and analysis.
 - c) All recovered cultural materials will be curated at an appropriate curation facility.
 - d) Public distribution and/or outreach of cultural information obtained from analysis of data recovery efforts.
3. The MOA was obtained after consultation with Native American representatives and SHPO to implement appropriate mitigation measures for CA-SBA-1010. The MOA requires that an Archaeological Treatment Plan be implemented for the project. If changes to the project's Archaeological Treatment Plan or APE are necessary, the MOA may require revisions and approval by SHPO. Project activities that may adversely affect cultural resources are not allowable until completion of fieldwork that is prescribed in the Archaeological Treatment Plan. Yearly reports documenting the fulfillment of commitments outlined in the MOA will be submitted to the SHPO.
4. Establishing environmentally sensitive areas (ESA) within the project limits to minimize any potential impacts to Cultural resources.
5. Monitoring by a qualified archaeologist and Native American tribal representative will be required during the archaeological investigation and during project construction.
6. During construction, activities that will involve ground disturbance will require the presence of the archaeological and Native American monitors.
7. If significant cultural materials are encountered during project-related activities, it may be necessary to temporarily divert work away from the location until cultural materials can be properly assessed, documented, and/or recovered.
8. If significant cultural materials are encountered during project-related activities and are either documented or recovered, a more formal and extensive report may be required.

9. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
10. Discovery of human remains is not anticipated. If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact District 5 Environmental Branch staff, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Water Quality and Storm Water Runoff Measures

To minimize impacts to water quality and storm water runoff for this project, the following measures will be implemented:

1. Standard precautionary procedures found in the Caltrans Stormwater Handbook – Construction Site Best Management Practices (March 2003) will be implemented. These precautionary procedures include, but are not limited to:
 - a. Temporary Soil Stabilization BMPs
 - b. Temporary Sediment Control
 - c. Tracking Control
 - d. Non-Storm Water Management
 - e. Waste Management Procedures
 - f. Materials Pollution Control BMPs

Natural Communities Measures

The following avoidance and minimization measures will be implemented:

1. Environmentally Sensitive Areas will be identified on the project mapping along the maximum disturbance limits to minimize disturbance to natural communities.
2. Special Provisions for the installation of ESA fencing will be included in the Construction Contract and will be identified on the project plans.
3. Prior to the start of construction activities, ESA areas will be delineated in the field and will be approved by Caltrans environmental division.
4. All areas temporally disturbed during construction will be restored back to pre-project conditions.

5. Impacts will be mitigated by restoring or reestablishing riparian vegetation along the current degraded streambank and riparian zone. Enhancement planting will occur on-site and in-kind using native plant species. Temporary impacts will be mitigated at a minimum of a 1:1 ratio. Permanent impacts will be mitigated at a minimum of a 3:1 ratio. A one-year plant establishment period will be required.

Wetlands and Other Waters Measures

The project will impact potential CDFW jurisdictional areas within the API. The following avoidance and minimization measures will be implemented for potential impacts to all jurisdictional areas resulting from the project:

1. San Antonio Creek will be completely avoided. No direct or indirect impacts will occur.
2. Prior to construction, Caltrans shall retain a qualified Biological Monitor to implement all biological pre-construction surveys, biological construction monitoring and reporting required for the project. The Biological Monitor must have demonstrated experience with all sensitive biological resources and species within the BSA and project vicinity. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on avoiding direct and indirect impacts to San Antonio Creek provided by the Biological Monitor prior to performing on-site work.
3. Prior to any ground-disturbing activities, ESA fencing shall be installed between the API and adjacent jurisdictional areas unless installation of fencing could potentially disturb San Antonio Creek. Caltrans-defined ESAs shall be noted on design plans and delineated in the field prior to the start of construction activities.
4. All project-related hazardous materials spills within the project site shall be cleaned up immediately. Readily accessible spill prevention and cleanup materials shall be kept by the contractor on-site at all times during construction.
5. During construction, erosion control measures shall be implemented. Fiber rolls, and barriers shall be installed as needed. At a minimum, erosion controls shall be maintained by the contractor on a daily basis throughout the construction period.
6. During construction, the cleaning and refueling of equipment and vehicles shall occur only within a designated staging area and at least 65 feet from jurisdictional areas. The staging areas shall conform to Best Management Practices (BMPs). Equipment and vehicles shall be checked and maintained by the contractor on a daily basis to ensure proper operation and avoid potential leaks or spills.

7. During construction, Caltrans shall ensure that the spread or introduction of invasive noxious plant species will be avoided to the maximum extent possible. When practicable, invasive noxious plants in the project site shall be removed and properly disposed.
8. All areas temporarily disturbed during construction will be restored back to pre-project conditions. Enhancement planting will be conducted on-site and in-kind using native plant species. Plant restoration or reestablishment will be implemented to prevent a net loss of streambank function and values. Temporary impacts will be mitigated at a minimum of a 1:1 ratio. Permanent impacts will be mitigated at a minimum of a 3:1 ratio.

Plant Species Measures

The following avoidance and minimization measures will be implemented for this project:

1. San Antonio Creek and the associated arroyo willow thicket habitat will be completely avoided. No direct or indirect impacts will occur.
2. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on special status plants species and avoiding impacts to San Antonio Creek and the associated arroyo thicket habitat.
3. San Antonio Creek and the arroyo willow thicket habitat will be designated as an environmentally sensitive area (ESA), which shall be noted on project design plans.

Animal Species Measures

The following avoidance and minimization measures will be implemented for animal species:

Western Pond Turtle

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on western pond turtle and avoiding direct and indirect impacts to San Antonio Creek provided by the Biological Monitor prior to performing on-site work.
2. If western pond turtles are observed within San Antonio Creek during construction within the BSA, the contractor will contact Caltrans District Biologist. The Biological Monitor will conduct a site visit and have the authority to stop work if construction is causing indirect impacts to individuals. The Biological Monitor shall determine an appropriate buffer until the individual leave the BSA. The Biological Monitor will only relocate

individuals outside of the BSA if relocation completely avoids direct and indirect impacts to San Antonio Creek.

Nesting Bird Species

The following avoidance and minimization measures will be implemented:

1. Caltrans Standard Specifications for Bird Protection (SSP 14-6.03) will be included with the project's Plans and Specifications. In addition, if an active nest is found, a qualified biologist shall determine an appropriate buffer or monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided, or monitoring shall continue until a qualified biologist has determined that juveniles have fledged.
2. If feasible, construction should be scheduled to occur outside the nesting season to avoid direct and indirect impacts to nesting birds. If construction occurs during the nesting season (February 1 to September 31), swallow nesting shall be excluded from the bridge prior to and during construction either by active removal of unfinished nest or through the use of exclusion netting. All swallow exclusion measures shall be implemented with methods that completely avoid direct and indirect impacts to San Antonio Creek and the arroyo willow thicket habitat.
3. If construction occurs during the nesting season (February 1 to September 31), preconstruction nesting bird surveys will be conducted two weeks prior to the onset of construction activities by the Biological Monitor. If an active nest is found, the Biological Monitor shall determine an appropriate buffer and monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided until the Biological Monitor has determined that juveniles have fledged.

American Badger

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representatives on the project site shall receive an American badger specific training provided by the Biological Monitor prior to performing on-site work.
2. Within 30 days prior to initiation of site disturbance and/or construction, the Biological Monitor will conduct a pre-activity (i.e., pre-construction) survey for sensitive species that have the potential to occur within the project limits, including American badger and their associated dens. If pre-construction surveys reveal a potential den (based on size of opening and depth) during the pupping season (March – September), the burrow will be flagged and monitored to assure that it is not being used as a natal den. If an active natal den is discovered, no work would be allowed within a buffer determined appropriate by the Biological Monitor until the den is vacated. If an active den is discovered outside of the pupping season, work would be required to cease

within a buffer determined appropriate by the Biological Monitor until the badger vacates – typically within 2 to 3 days, and the den would be destroyed to discourage the badger from returning.

3. During the site-disturbance and/or construction phase, any equipment or materials that contain holes with a diameter of 4 inches or greater stored overnight at the project site should be thoroughly inspected for trapped American Badger before the subject equipment or materials are subsequently used or moved in any way. If American Badger is found, work will stop, and the Biological Monitor will be notified. Work may resume when the Biological Monitor has received authorization from the appropriate agency.
4. Prior to, during, and after the site-disturbance and/or construction phase, use of pesticides or herbicides should be in compliance with all federal, state, and local regulations. No rodenticides may be used, due to the risk to American badger.
5. During the site-disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures an American badger, or finds any such animal either dead, injured, or entrapped is required to report the incident immediately to the Biological Monitor (who will in turn contact CDFW). Caltrans shall insure that any threatened, endangered or protected species found dead or injured be turned over immediately to the CDFW for care, analysis, or disposition.
6. No firearms or pets shall be allowed on the project site.
7. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from the project site.

Bats

The following avoidance and minimization measures will be implemented:

1. Construction will be limited to daylight hours between sunrise and sunset, as defined by the U.S. Naval Observatory (<http://www.usno.navy.mil/USNO/astromical-applications>).
2. If construction occurs during the bat maternity roosting season (February 15 to September 1), a bat roost survey shall be conducted by the Biological Monitor within seven (7) days prior to construction. If an active day roost is found, Caltrans shall coordinate with CDFW to determine an appropriate buffer based on the habits and needs of the species. Readily visible exclusion zones shall be established in areas where roosts must be avoided using ESA fencing. Work in the buffer area shall be avoided until the Biological Monitor has determined that roosting activity has ceased. Active bat maternity roosts shall not be disturbed or destroyed at any time.

Threatened and Endangered Species Measures

The following avoidance and minimization measures will be implemented:

The following avoidance and minimization measures will be implemented for the following species: Gambel's water cress (*Nasturtium gambelii*), La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*), Southwestern willow flycatcher (*Empidonax traillii extimus*), and Least Bell's vireo (*Vireo bellii pusillus*) and Southern California steelhead (Southern California ESU) (*Oncorhynchus mykiss irideus*).

1. The project will completely avoid San Antonio Creek. No direct or indirect impacts will occur.
2. Prior to construction, Caltrans shall retain a qualified Biological Monitor to implement all biological pre-construction survey, biological construction monitoring and reporting for the required project.
3. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on special status plants and avoiding impacts to San Antonio Creek and the associated arroyo willow thicket habitat. Training will be provided by the Biological Monitor prior to performing on-site work.
4. San Antonio Creek and the arroyo willow thicket habitat will be designated as Caltrans-define ESA and shall be noted on design plans.
5. Prior to any ground-disturbing activities, ESA fencing shall be installed to identify exclusion zones within the project API. Readily visible exclusion zones shall be established to limit potential impacts from project activities.

California Red-Legged Frog and California Tiger Salamander

These species are discussed together because they have similar habitat requirements, project-related impacts and avoidance and minimization measures.

The following avoidance and minimization measures will be implemented:

1. All employees, subcontractors, and contractor's representatives on the project site shall receive a CRLF and CTS specific training provided by the Biological Monitor prior to performing on-site work.
2. The Biological Monitor shall survey the project area no more than 48 hours before the onset of work activities. All excavation and vegetation removal shall be monitored by the Biological Monitor. The Biological Monitor shall be on site and monitoring during all new excavations and vegetation removal. In addition, the Biological Monitor will conduct a monitoring visit at a minimum of once per week throughout the entire length of construction and prepare reports documenting effectiveness of avoidance measures.
3. Prior to or during project activities, if any observations are made of CRLF or CTS, within or adjacent to the project limits, the contractor will contact the Caltrans District Biologist. All work within 500 feet of the protected amphibian species will stop until such time that Caltrans receives concurrence

from USFWS (and from CDFW in the case of CTS) that it is appropriate to resume work. Similarly, if the Biological Monitor observes any CRLF or CTS all work within 500 feet of the protected amphibian species will stop until such time that Caltrans receives concurrence from USFWS (and from CDFW in the case of CTS) that it is appropriate to resume work.

4. During project activities, all trash that may attract predators or scavengers shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
5. To control sedimentation during and after project completion, Caltrans shall implement BMPs outlined in the Caltrans Standard Specifications and Plans.
6. All refueling, maintenance and staging of equipment and vehicles shall occur at least 65 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat unless otherwise preapproved by the necessary agencies. Caltrans inspectors ensure contamination of habitat does not occur during operations. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
7. Habitat contours shall be returned to a natural configuration at the end of the project activities in all areas of temporary impact.
8. The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project. ESAs shall be established to confine access routes and construction areas to the minimum area necessary to complete construction.
9. Water shall not be impounded in a manner that may attract CRLF or CTS.

Unarmored Threespine Stickleback (UTS)

The following avoidance and minimization measures will be implemented:

1. San Antonio Creek will be completely avoided. No direct or indirect impacts will occur to unarmored threespine stickleback individuals or habitat.
2. Vibratory hammer will be used during construction to avoid impacting unarmored threespine stickleback inhabiting the creek.
3. All employees, subcontractors, and contractor's representatives on the project site shall receive a specific training on unarmored threespine stickleback and avoiding impacts to San Antonio Creek. The training will be provided by the Biological Monitor prior to performing on-site work.
4. San Antonio Creek will be designated as Caltrans-defined ESAs and shall be noted on design plans.

5. A Biological Monitor will conduct a monitoring visit at a minimum of once per week throughout the entire length of construction and prepare reports documenting effectiveness of avoidance measures.

Invasive Species Measures

The following avoidance and minimization measures will be implemented:

1. During construction, Caltrans will ensure that the spread or introduction of invasive noxious plant species will be avoided to the maximum extent possible.
2. When practicable, invasive noxious plants within the project site shall be removed and properly disposed.

Construction Impact Measures

The following avoidance and minimization measures will be implemented:

Air Quality

Caltrans Standard Specification sections pertaining to dust control and dust palliative application are required for all construction contracts and would effectively reduce and control construction-emission impact. The provisions of Caltrans Standard Specification, Section 10-5 “Dust Control” and Section 14-9 “Air Pollution Control” require the contractor to comply with all California Air Resources Board and Santa Barbara County Air Pollution Control District rules, ordinances, regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.

Noise

Equipment Noise Control

1. Use newer equipment with improved muffling and ensure that all equipment items have the manufacturers’ recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers, and shrouding, etc.).
2. Use construction methods or equipment that will provide the lowest level of noise and ground vibration impact, such as alternative low noise pile installation methods.
3. Turn off idling equipment
4. Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receptors against excessive noise from construction activities. Noise barriers can be made of heavy plywood or moveable insulated sound blankets.

Administrative Measures

1. Implement a construction noise and vibration-monitoring program to limit the impacts.
2. Plan noisier operations during times of least sensitivity to receptors.
3. Keep noise levels relatively uniform and avoid impulsive noises.
4. Maintain good public relations with the community to minimize objections to the unavoidable construction impacts. Provide frequent activity update of all construction activities.



Appendix C State Clearinghouse Letter

This appendix contains a letter from the Governor's Office of Planning and Research indicating Caltrans' compliance with the State Clearinghouse review requirements.



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH



KEN ALEX
DIRECTOR

November 20, 2018

Matt Fowler
California Department of Transportation, District 5
50 Higuera St
San Luis Obispo, CA 93401

Subject: San Antonio Creek Bridge Scour Mitigation
SCH#: 2018101044

Dear Matt Fowler:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on November 19, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Morgan".

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
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**Document Details Report
State Clearinghouse Data Base**

SCH# 2018101044
Project Title San Antonio Creek Bridge Scour Mitigation
Lead Agency Caltrans #5

Type MND Mitigated Negative Declaration
Description Caltrans proposes to prevent further scour damage on the south-western bent of the San Antonio Creek Bridge (Br. No. 51-0237 L/R), located on SR 1 at PM 33.1 in Santa Barbara County. San Antonio Creek Bridge have been listed as scour critical and scour countermeasures have been recommended as a plan of action. The project proposes to install sheet pile walls and rock slope protection to address the scour issue. The proposed work will have an effect on historic properties eligible for the National Register of Historic Places.

Lead Agency Contact

Name Matt Fowler
Agency California Department of Transportation, District 5
Phone 805-542-4603 **Fax**
email
Address 50 Higuera St
City San Luis Obispo **State** CA **Zip** 93401

Project Location

County Santa Barbara
City Lompoc
Region
Lat / Long 34° 46' 33.8" N / 120° 29' 4.8" W
Cross Streets Hwy 1/San Antonio Rd East
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1
Airports
Railways
Waterways San Antonio Creek
Schools
Land Use

Project Issues Archaeologic-Historic; Biological Resources

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Regional Water Quality Control Board, Region 3; Native American Heritage Commission

Date Received 10/19/2018 **Start of Review** 10/19/2018 **End of Review** 11/19/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

Response to the Governor's Office of Planning and Research

Thank you for acknowledging Caltrans' compliance with the State Clearinghouse review requirement.

Appendix D Comment and Response

This appendix contains the comments received during the public circulation and comment period from October 19, 2018 to November 19, 2018. A Caltrans response follows each comment presented.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Rd
San Diego, CA 92123
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



November 19, 2018

Matt Fowler
Senior Environmental Planner
California Department of Transportation
Central Coast Environmental Management Branch
50 Higuera Street
San Luis Obispo, CA 93401
matt.c.fowler@dot.ca.gov

Subject: Mitigated Negative Declaration (MND)/ Environmental Assessment-State Route 1
(SR-1) San Antonio Creek Bridge Scour Mitigation Project (Project), SCH#
2018101044, Santa Barbara County

Dear Mr. Fowler:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to adopt a MND for the SR-1 San Antonio Creek Bridge Scour Mitigation Project (Project) from the California Department of Transportation (Caltrans) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the state [Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is mandated to provide, as available, biological expertise during public agency environmental review, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. For example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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California Department of Transportation
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(Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" of any species protected under the California Endangered Species Act (CESA; Fish & G. Code § 2050 et seq.), or state-listed rare plants pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Caltrans District 5.

Objective: Caltrans proposes actions to prevent further scour damage on the southwestern bent of the San Antonio Creek Bridge (Br. No. 51-0237 L/R). Existing erosion control features are inadequate at preventing continued lateral bank erosion that could potentially undermine the footings of Bent 2. The existing bridge foundation was identified as scour critical and The Structure Replacement and Improvement Needs Report determined the need for scour mitigation. The upgrade would involve extending the length of the existing sheet piles and adding additional rock-slope-protection (RSP). The new sheet piles would extend along the creek's southern bank and upstream from the bridge. The additional RSP will be placed along the slope above the creek and behind the sheet piles, mimicking the existing design.

Location and Timeframe: The Project is set in rural area adjacent to SR-1 at postmile 33.1, which is currently a divided four-lane highway. The proposed Project is located approximately 12.0 miles north of the City of Lompoc in Santa Barbara County. Construction activities would occur for approximately 80 days during fiscal year 2022 to 2023.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Caltrans in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

For impacts demonstrated to be unavoidable in the MND, CDFW recommends measures or revisions below that Caltrans should include in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring and reporting program (Public Resources Code 21081.6 and CEQA Guidelines Section 15097).

COMMENT #1:

Section 2.3.5, Page 43

Issue: Potential indirect effects to San Antonio Creek after construction that could occur at a later time and/or place are not adequately analyzed in the MND.

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1-1

Specific impact: Hydrologic and hydraulic effects on resident unarmored three spine stickleback (UTS; *Gasterosteus aculeatus williamsoni*) and migratory fish species (e.g. southern California steelhead, *Oncorhynchus mykiss irideus*) are not evaluated in the MND. UTS is a State, fully-protected species (Fish and Game Code §§ 3511, 4700, 5050 and 5515) that may not be taken or possessed at any time and no licenses or permits may be issued for its take except for collecting these species for necessary scientific research unless authorized through a Natural Community Conservation Plan (NCCP; Fish & G. Code § 2800 et seq.). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (Fish & G. Code §86).

Why impact would occur: Extending the sheet pile wall may substantially change flow patterns and velocities in San Antonio Creek over time and alter how it conveys water, sediment, and debris. The proposed Project could result in significant adverse impacts for resident and migratory fish through long-term change in channel geomorphology and alteration of flow and depth dynamics resulting in potential entrapment or disruption of movement.

1-2

Evidence impact would be significant: The existing sheet pile wall along with the proposed extension may increase stream bed degradation, streambank erosion and localized stream flow velocity/turbulence resulting in a significant adverse effect to fishery resources. Based on evidence presented in the MND, CDFW does not concur that the proposed Project activities would have no impact on checklist questions a), c) and d) (See MND page 72). A technical study for Floodplain and Fish Passage Analysis was conducted for the MND (see MND page 169). This study was not included in the MND for CDFW to review, nor were the conclusions of the technical study incorporated into the MND discussion (MND Section 2.3) to support a no impact determination.

Recommended Potentially Feasible Mitigation Measure(s)

1-3

Mitigation Measure #1:

To minimize significant impacts to wildlife resources, CDFW recommends the final environmental document include analysis of existing and proposed Project effects on fish passage and floodplain functions (and corresponding mitigation) to San Antonio Creek including, but not limited to, CDFW Salmonid Habitat Restoration Manual (SHRM) Volume II Part IX *Fish Passage Evaluation at Stream Crossings* (March 2004). If the existing bridge-crossing or proposed Project significantly cause an impairment of fish passage, then the Project should be modified to be compliant with Fish and Game Code Section 5901, and Streets and Highways Code (Division 1, Chapter 1, Article 3.5 §156 *et seq.*). These codes require Caltrans to conduct a fish passage assessment at stream crossings where anadromous fish are known or historically known to occur and remediate existing fish passage barriers along with new projects that do not present a barrier to fish passage. We recommend the use of modeling (e.g., HEC-RAS 18) and other information to demonstrate that no long-term effects to fish passage from bridge scour would occur.

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Mitigation Measure #2:

Prior to implementing the Project, Caltrans will coordinate with CDFW to assure that direct and indirect take to UTS, a State fully-protected species, will be avoided.

Editorial Comments and/or Suggestions

Section 2.3.4 of the MND evaluates Project effects on any species identified as a candidate, sensitive, or special-species in local or regional plans, policies, or regulations, or by CDFW or USFWS, and proposes to adopt avoidance, minimization, and mitigation measures. If the Project requires such species to be removed, disturbed, or otherwise handled, we recommend that the environmental document clearly identify that the designated entity obtain all appropriate state and federal permits. Please contact CDFW staff listed in letter for assistance in determining if state permits are necessary.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project would have an impact on fish and/or wildlife and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the lead agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying project approval to be operative, vested and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the draft MND to assist Caltrans in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed to Mr. Matt Chirdon, Senior Environmental Scientist (Specialist), at (805) 640-1165 or matthew.chirdon@wildlife.ca.gov.

1-4

Mr. Fowler, Senior Environmental Planner
California Department of Transportation
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Sincerely,

A handwritten signature in blue ink, appearing to read "Randy F. Rodriguez".

Erinn Wilson
Environmental Program Manager

cc: Randy Rodriguez, CDFW Supervisor (Ven-SB), Randy.Rodriguez@wildlife.ca.gov
Office of Planning and Research, state.clearinghouse@opr.ca.gov

Response to Comment #1 from California Department of Fish and Wildlife (CDFW)

Response to Comment 1-1:

The intent of the project is to extend the sheet pile walls to halt the erosion of the creek banks and help stabilize the banks to protect the bridge foundations without requiring work in the creek. Based on available information for the area, the Floodplain and Fish Passage Analysis had concluded that the project would be repairing the scoured bank without introducing new cuts or fill, and no long term change to the existing creek flow or fish passage conditions are anticipated. Based on project design and construction approach, it is anticipated that the project would not result in long term changes or alteration to the creek flow and depth dynamics that could lead to adverse impacts to UTS.

Response to Comment 1-2:

The project proposes to extend the existing sheet piles on the southwestern bent of the San Antonio Creek Bridge. Rock Slope Protection will be installed behind the new sheet piles. The proposed action was decided upon as a way to avoid impacts to the creek and the footprint of the new revetment is very small relative to what is existing.

The existing bank has already experienced erosion and the proposed revetment will stop this process. The new sheet piles and RSP will not modify the creek cross-section, stream flow/velocity/turbulence beyond what was previously present before the erosion occurred; therefore, there will be no change in flow characteristics.

The MND has updated the CEQA Evaluation question a) for Biological Resource to *Less Than Significant*. The evaluation was based on temporary impacts associated with construction activities that could indirectly effect species habitat. (e.g., fugitive dust, noise, etc.).

For question c) of the CEQA Evaluation for Biological Resources, there are no federally protected wetlands identified within the project impact area, so the project would have no impact to federally protected wetlands.

For question d) of the CEQA Evaluation for Biological Resources, the project will not restrict the movement of resident or migratory wildlife and no work will occur in San Antonio Creek, so the project would not impact wildlife movement.

Response to Comment 1-3:

There is no documented floodplain in the project area because it is located on Vandenberg Air Force Base property. The Location Hydraulic Study indicates that the project would not raise water surface elevation due to the insignificant changes in the creek cross-section. The highway and bridge are constructed considerably higher than any anticipated flood flow elevations. There are no existing structures in the immediate vicinity of the project that would be affected by flooding. The longitudinal slope of the creek bed at the bridge is relatively flat due to the grade break downstream. This protects the creek bed from degrading at this location.

The Floodplain and Fish Passage Analysis did not include an in-depth analysis of the creek as conducting one may result in potential impacts to unarmored three spine stickleback (UTS). A more in-depth Fish Passage Analysis than the one already conducted would require entry into the creek itself, as the area is overgrown with vegetation on the banks and in the creek. An extensive area upstream and downstream would be disturbed to capture data to perform more detailed analysis. As noted, the UTS is a fully-protected species and therefore, no license or permit could be issued to authorize entry in to the creek to collect data for an in-depth analysis. There is no guarantee that UTS would not be impacted as result of conducting an in-depth Fish Passage Analysis, thus it was not conducted to avoid potentially impacting UTS. However, the existing bridge structure is classified as “not a fish passage barrier” by the California Fish Passage Assessment Database and no barriers were observed during biological investigations for this project. As noted above, the new sheet piles and RSP will not modify the creek cross-section, stream flow/velocity/turbulence beyond what was previously present before the erosion occurred. Therefore, the existing bridge-crossing and the proposed project will not cause an impairment of fish passage and is compliance with Fish and Game Code and Streets and Highways Code.

The document has been updated to include the conclusions from the HEC-RAS modeling conducted for the Location Hydraulic Study that was completed in January 2019.

Response to Comment 1-4:

Caltrans will continue coordination with CDFW to obtain the appropriate permits needed for this project. A summary of permits to be obtained for this project is presented in Section 1.7.

Appendix E SHPO Concurrence Letter



State of California • Natural Resources Agency

Edmund G. Brown Jr., Governor

**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

August 1, 2018

VIA ELECTRONIC MAIL

Reply in Reference To: FHWA_2018_0621_002

Ms. Alex Bevk Neeb, Section 106 Coordinator
Cultural Studies Office
Caltrans Division of Environmental Analysis
1120 N Street, MS-27
Sacramento, CA 95814

Subject: Historic Property Survey Report and Finding of Adverse Effect for the San Antonio Creek Bridge Scour Mitigation Project, Santa Barbara County, CA

Dear Ms. Bevk Neeb:

On June 21, 2018, the Office of Historic Preservation (OHP) received a letter from the California Department of Transportation (Caltrans) initiating consultation with the State Historic Preservation Officer (SHPO) regarding the above referenced undertaking in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

Pursuant to Stipulation VIII.C.6 and Stipulation X.C.1 of the Section 106 PA, Caltrans is seeking SHPO comment on a determination of eligibility and finding of effect for the proposed undertaking. Enclosed with Caltrans' letter is a Historic Property Survey Report (HPSR) for this undertaking. Attached to the HPSR is the Archaeological Survey, Extended Phase I and Archaeological Evaluation Report (AS/XPI/AER), and the Finding of Effect (FOE).

Caltrans proposes to extend existing sheet piling and add rock slope protection to reduce erosion from San Antonio Creek near the foundation of the southeastern bent of Bridge No. 51-0237L/R along State Route (SR) 1 on Vandenberg Air Force Base (AFB) in Santa Barbara County, California. As part of the undertaking a geotechnical core will be employed to define the geology of the area of potential effects (APE) and a temporary access road will be created for equipment to ingress/egress from SR 1. A more detailed description of the undertaking and APE can be found on pages one and two of the HPSR.

Caltrans' efforts to identify historic properties that may be affected by the undertaking are documented in the HPSR and AS/XPI/AER Reports, and included a records search,

Ms. Bevk Neeb
August 1, 2018
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FHWA_2018_0621_002

archaeological pedestrian survey, XPI and Phase II archaeological investigations, and Native American consultation. Identification efforts identified one prehistoric site, CA-SBA-1010 (the Barka Slough Site), a complex, stratified, multicomponent prehistoric archaeological site.

Due to poor surface visibility and that sites on the San Antonio Creek valley floor (including CA-SBA-1010) are typically buried, an XPI investigation was conducted to determine the presence or absence of cultural materials. Results from the XPI confirmed the presence of intact near-surface archaeological deposits associated with CA-SBA-1010 within the proposed access/haul road portion of the APE, and therefore a Phase II study was warranted. The Phase II fieldwork involved the manual excavation to recover a sample of the deposit and to define the site boundary. The XPI/Phase II results identified that CA-SBA-1010 contains data necessary to address important research issues about the prehistory of the San Antonio Creek Valley addressed in the Phase II research design.

Native American consultation is documented in the HPSR. To date, Caltrans has not received comments from any consulting Native American tribe, group, or individual that CA-SBA-1010 has cultural values other than those associated with National Register of Historic Places (NRHP) Criterion D (data potential).

As a result of the XPI/Phase II investigations, Caltrans has determined that CA-SBA-1010 is eligible for listing on the NRHP under Criterion D, and requests SHPO concurrence with this determination in accordance with Stipulation VIII.C.6 of the Section 106 PA. **I concur.**

Caltrans has applied the criteria of adverse effect in accordance with Stipulation X.A of the Caltrans Section 106 PA, and finds that construction activities related to the current undertaking have the potential to cause physical destruction or damage to portions of CA-SBA-1010. Pursuant to Stipulation X.C.1 of the Section 106 PA, Caltrans is requesting SHPO concurrence with the finding of adverse effect for the undertaking as a whole. **I concur.**

In accordance with Stipulation XI of the Section 106 PA, Caltrans will continue consultation with the SHPO on the resolution of adverse effects as a result of this undertaking. If you require further information, please contact Alicia Perez of my staff at 916-445-7020 or Alicia.Perez@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



Appendix F SHPO Memorandum of Agreement (MOA)

MEMORANDUM OF AGREEMENT

**BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE SAN ANTONIO CREEK BRIDGE SCOUR MITIGATION
PROJECT ALONG HIGHWAY 1 AT PM 33.1, SANTA BARBARA COUNTY,
CALIFORNIA**

WHEREAS, the Federal Highway Administration (FHWA) has assigned and California Department of Transportation (Caltrans) has assumed FHWA responsibility for environmental review, consultation, and coordination under the provisions of the *Memorandum of Understanding (MOU) between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 U.S.C. 327*, which became effective on December 23, 2016, and applies to this undertaking; and

WHEREAS, pursuant to the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA), Caltrans is deemed to be a federal agency for all highway-aid projects it has assumed, and in that capacity Caltrans has assigned the role of “agency official” to the Caltrans Division of Environmental Analysis (DEA) Chief for the purpose of compliance with 36 CFR Part 800. The responsibility for oversight, day-to-day responsibilities and coordination of the Section 106 process are further delegated to the DEA Cultural Studies Office (CSO) Chief; and

WHEREAS, Caltrans proposes to construct the federally funded San Antonio Creek Bridge Scour Project (Undertaking) on State Route 1 in Santa Barbara County within the Caltrans easement on Vandenberg Air Force Base, which would construct rock slope protection to reduce erosion at the base of the bridge, as described in Attachment A to the Memorandum of Agreement (MOA); and

WHEREAS, pursuant to 36 CFR 800.2(a)(2), Vandenberg Air Force Base has designated Caltrans the lead federal agency for the purposes of compliance with the National Historic Preservation Act (NHPA), as described in Attachment D; and

WHEREAS, the Undertaking’s Area of Potential Effect (APE) in Attachment B includes all areas where work is proposed, including the known or reasonably anticipated boundaries of archaeological and cultural properties and any locations where construction activities will take place; and

WHEREAS, Caltrans has determined that the Undertaking will have an adverse effect on archaeological site CA-SBA-1010, a property determined to be eligible for inclusion in the National Register of Historic Places (National Register) under Criterion D (with concurrence

from the California State Historic Preservation Officer), and therefore is a historic property as defined at 36 CFR Part 800.16(I)(1); and

WHEREAS, Caltrans has consulted with the California State Historic Preservation Officer (SHPO) pursuant to Stipulation X.C and XI of Section 106 PA, and where the Section 106 PA so directs, in accordance with 36 CFR Part 800, the regulation that implements Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended regarding the Undertaking's effect on historic properties, and has notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect finding pursuant to 36 CFR § 800.6(a)(1), and will file a copy of this MOA with the ACHP in accordance with Stipulation X.C.3.b of the Section 106 PA; and

WHEREAS, Caltrans has thoroughly considered alternatives to the Undertaking, has determined that the Undertaking's adverse effects to CA-SBA-1010 cannot be avoided, and that implementation of the treatments set forth in Stipulation II of this MOA will take into account the Undertaking's adverse effects on the historic property; and

WHEREAS, Caltrans District 5 (District 5) has a responsibility to fulfill terms of this MOA, and is participating as an invited signatory; and

WHEREAS, Caltrans has consulted with Vandenberg Air Force Base as Federal landowner regarding the Undertaking and its adverse effects on the subject historic property, and has invited them to participate in this MOA as an invited signatory; and

WHEREAS, Caltrans continues on-going consultation with the Santa Ynez Band of Chumash Indians and has invited them to concur on this MOA;

NOW, THEREFORE, Caltrans and the SHPO agree that if the Undertaking proceeds, the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties, and further agree that these stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated.

STIPULATIONS

Caltrans shall ensure that the following stipulations are carried out:

I. AREA OF POTENTIAL EFFECTS

- A.** The Area of Potential Effects (APE) was designed in accordance with Stipulation VIII.A of the Section 106 PA and is depicted in Attachment B of this MOA. The APE includes the maximum existing or proposed right-of-way for all alternatives under consideration, easements (temporary and permanent), all improved properties subject to temporary or permanent changes in access (ingress and egress), and areas where visual or audible changes could occur outside the required right-of-way.

- B. If Caltrans determines that additional APE revisions are necessary subsequent to the execution of this MOA, Caltrans shall inform the parties to the MOA of the revisions and consult for no more than 15 days to reach agreement on the proposed revisions. If Caltrans, the SHPO, and other appropriate signatories cannot reach such agreement, then the parties to this MOA shall resolve the dispute in accordance with Stipulation VI.C below. If all parties reach mutual agreement on the proposed revisions, Caltrans will submit a new APE map reflecting the revisions, consistent with Stipulation VIII.A and Attachment 3 of the Section 106 PA, no later than 30 days following such agreement. Any further investigation or document necessitated by the revised APE will follow the procedures for the identification and evaluation of potential Historic Properties as specified in Stipulation VIII of the Section 106 PA and in accordance with 36 CFR §800.4(a)(2-4) and 88.4(b). Amendment of the APE will not require an amendment to the MOA. The revised APE and supporting documentation shall be incorporated into Attachment B to this MOA.

II. TREATMENT OF THE HISTORIC PROPERTY

A. Historic Property Treatment Plan

1. Caltrans will ensure that the adverse effects of the Undertaking on archaeological site CA-SBA-1010 are resolved by implementing the July 2018 *Archaeological Treatment Plan, P-42-001010 (CA-SBA-1010), San Antonio Creek Bridge Scour Mitigation Project, Santa Barbara County, California* (Treatment Plan) that is Attachment C of this MOA. Data recovery is prescribed for archaeological deposits contributing to the National Register eligibility of this historic property adversely affected by construction activities. In addition, the Treatment Plan includes methods for Native American coordination, public outreach, and curation.
2. In order to avoid adverse effects to contributing deposits of CA-SBA-1010 outside of the ADI, Caltrans will protect those contributing deposits by identifying them as Environmentally Sensitive Areas (ESAs), which shall be described in information included in the final construction plans of the Undertaking, and by enclosing within the temporary fencing the remainder of the site areas located outside the ADI. Caltrans shall further ensure that the integrity of the fence line as installed will be monitored by the archaeologist throughout the duration of the construction activities in the vicinity of the site. An ESA Action Plan, prepared in accordance with Attachment 5 of the Section 106 PA, is included within the Treatment Plan, Attachment C of this MOA.
3. Any party to this MOA may propose to amend the Treatment Plan. Such amendment will not require amendment of this MOA. Consultation on Treatment Plan amendments will be no longer than thirty (30) days in duration beginning upon receipt of proposed amendments by consulting parties.
4. In the event that disputes regarding amendments proposed hereunder arise, they shall be addressed through further consultation among the MOA parties, and a reasonable time frame for such consultation shall be established by Caltrans of not less than fifteen days unless agreed upon by the signatories. If the dispute is not resolved within this time frame, Caltrans shall render a final decision regarding the dispute and the MOA parties shall proceed in accordance with the terms of that decision.
5. Caltrans will not authorize the execution of any Undertaking activity that may adversely affect historic properties in the Undertaking's APE prior to the implementation and completion of the fieldwork that the Treatment Plan prescribes.

B. Reporting Requirements and Related Reviews

1. Within eighteen (18) months after District 5 has determined that all fieldwork required by Stipulation II has been completed, Caltrans will ensure preparation, and subsequent distribution to Caltrans CSO and any participating representatives of the Santa Ynez Band of Chumash Indians for review and comment, a draft technical report that documents the results of implementing and completing the Treatment Plan. These parties will be afforded thirty (30) days following receipt of the draft technical report to submit any written comments to District 5. Failure to respond within this time frame shall not preclude District 5 from authorizing revisions to the draft technical report as District 5 may deem appropriate.
2. District 5 will take all comments into account in revising the technical report and submit a final version to CSO for approval. Upon approval, CSO will transmit the technical report to the SHPO along with any comments from the Santa Ynez Band of Chumash Indians that were not addressed in the report. The SHPO will have thirty (30) days to comment on the report. If the SHPO does not respond within thirty (30) days Caltrans may consider the submitted report as final. The SHPO may request a fifteen (15) day extension if needed.
3. Copies of the final technical report documenting the results of the Treatment Plan implementation will be distributed by District 5 to the SHPO, participating Native Americans, and to the Central Coast Information Center of the California Historical Resources Information System.

III. NATIVE AMERICAN CONSULTATION

Caltrans has consulted with the Santa Ynez Band of Chumash Indians, as described in the Treatment Plan, regarding the proposed Undertaking and its effects on the historic property CA-SBA-1010, and will continue to consult with them, has invited them to sign as a concurring party on this MOA, and will afford them, should they so desire, the opportunity to participate in the implementation of this MOA and the Undertaking. If other tribes or Native American groups who attach religious or cultural significance to historic properties that may be affected by the Undertaking are identified, Caltrans will invite them to participate as consulting parties as the Section 106 process moves forward.

IV. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN

As legally mandated, human remains and related items discovered during the implementation of the terms of this Agreement and the Undertaking will be treated in accordance with the Native American Graves Repatriation Act of 1990 (NAGPRA) (23 USC 3001). All activities within the vicinity of the discovery will be stopped and both the Caltrans Archaeologist and the Vandenberg Air Force Base Archaeologist will be consulted on how to proceed. The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on Federal land are described in the regulations that implement NAGPRA 43 CFR Part 10. All work in the vicinity of the discovery shall be halted and the Vandenberg Air Force Base Archaeologist shall be notified immediately. This notification shall be followed by a written report within 48 hours. The Undertaking's implementation/ construction in the vicinity of the discovery may not resume until Vandenberg Air Force Base complies with the 43 CFR Part 10 regulations and provides

notification to proceed. The responsible Federal agency official (43 CFR 10.2(2)) will be Vandenberg Air Force Base.

V. DISCOVERIES AND UNANTICIPATED EFFECTS

If Caltrans determines after construction of the Undertaking has commenced, that either the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner, Caltrans will address the discovery or unanticipated effect in accordance with Stipulation XV.B of the Section 106 PA. Caltrans at its discretion may hereunder and pursuant to 36 CFR § 800.13 (c) assume any discovered property to be eligible for inclusion in the National Register.

VI. ADMINISTRATIVE PROVISIONS

A. STANDARDS

1. **Definitions.** The definitions provided at 36 CFR § 800.16 are applicable throughout this MOA.
2. **Parties to this agreement are defined as follows:**
 - i. **Signatory parties** have the sole authority to execute, amend, or terminate this MOA.
 - ii. **Invited signatory parties** have the same rights to terminate or amend this MOA as the other signatories.
 - iii. **Concurring parties** signing this MOA do so to acknowledge their agreement or concurrence with the MOA, but have no legal authority under the MOA to terminate or amend this MOA. Concurring with the terms of this MOA does not constitute their agreement with the Undertaking.
3. **Professional Qualifications.** Caltrans will ensure that only individuals meeting *Professional Qualifications Standards* (48 FR 44738-39) as defined in Attachment 1 of the PA, in the relevant field of study carry out or review appropriateness and quality of the actions and products required by Stipulations I through V in this MOA. However, nothing in this stipulation may be interpreted to preclude Caltrans or any agent or contractor thereof from using the properly supervised services of persons who do not meet the PQS.
4. **Documentation Standards.** Written documentation of activities prescribed by Stipulation II of this MOA shall conform to *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716 44740) as well as to applicable standards and guidelines established by the SHPO.
5. **Curation and Curation Standards.** Caltrans shall ensure that, to the extent permitted under § 5097.98 and § 5097.991 of the California Public Resources Code, the materials and records resulting from the activities prescribed by this PA are curated in accordance with the California Office of Historic Preservation's "Guidance for the Curation of Archaeological Collections" (i.e., 1993 State Curation Guidelines). Caltrans shall ensure that the views of the consulting parties are taken into consideration prior to decisions being made about the final disposition of archaeological materials resulting from activities prescribed by this MOA.

B. CONFIDENTIALITY

The parties to this MOA acknowledge that the historic properties covered by this MOA are subject to the provisions of § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archaeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with said sections.

C. RESOLVING OBJECTIONS

1. Should any party to this MOA object to the manner in which the terms of this MOA are implemented, to any action carried out or proposed with respect to implementation of the MOA (other than the undertaking itself), or to any documentation prepared in accordance with and subject to the terms of this MOA, Caltrans shall immediately notify the other MOA parties of the objection, request their comments on the objection within fifteen (15) days following receipt of Caltrans' notification, and proceed to consult with the objecting party for no more than thirty (30) days to resolve the objection. Caltrans will honor the request of the other parties to participate in the consultation and will take any comments provided by those parties into account.
2. If the objection is resolved during the thirty (30)-day consultation period, Caltrans may proceed with the disputed action in accordance with the terms of such resolution.
3. If at the end of the thirty (30)-day consultation period, Caltrans determines that the objection cannot be resolved through such consultation, then Caltrans shall forward all documentation relevant to the objection to the ACHP, including Caltrans' proposed response to the objection, with the expectation that the ACHP will, within thirty (30) days after receipt of such documentation:
 - i. Advise Caltrans that the ACHP concurs in Caltrans' proposed response to objection, whereupon Caltrans will respond to the objection accordingly. The objection shall thereby be resolved; or
 - ii. Provide Caltrans with recommendations, which Caltrans will take into account in reaching a final decision regarding its response to the objection. The objection shall thereby be resolved; or
 - iii. Notify Caltrans that the objection will be referred for comment pursuant to 36 CFR §800.7(c) and proceed to refer the objection and comment. Caltrans shall take the resulting comments into account in accordance with 36 CFR § 800.7(c) (4) and Section 110(1) of the NHPA. The objection shall be resolved.
4. Should the ACHP not exercise one of the above options within 30 days after receipt of all pertinent documentation, Caltrans may proceed to implement its proposed response. The objection shall thereby be resolved.
5. Caltrans shall take into account any of the ACHP's recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection. Caltrans's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.
6. At any time during implementation of the measures stipulated in this MOA, should a member of the public raise an objection in writing pertaining to such implementation to any signatory party to this MOA, that signatory party shall immediately notify Caltrans. Caltrans shall immediately notify the other signatory parties in writing of the objection.

Any signatory party may choose to comment in writing on the objection to Caltrans. Caltrans shall establish a reasonable time frame for this comment period. Caltrans shall consider the objection, and in reaching its decision, Caltrans will take all comments from the other signatory parties into account. Within fifteen (15) days following closure of the comment period, Caltrans will render a decision regarding the objection and respond to the objecting party. Caltrans will promptly notify the other signatory parties of its decision in writing, including a copy of the response to the objecting party. Caltrans decision regarding resolution of the objection will be final. Following issuance of its final decision, Caltrans may authorize the action subject to dispute hereunder to proceed in accordance with the terms of that decision.

7. Caltrans shall provide all parties to this MOA, and the ACHP, if the ACHP has commented, and any parties that have objected pursuant to sections C.3 and C.4 of this Stipulation, with a copy of its final written decision regarding any objection addressed pursuant to this stipulation.
8. Caltrans may authorize any action subject to objection under this stipulation to proceed after the objection has been resolved in accordance with the terms of this stipulation.

D. AMENDMENTS

1. Any party to this MOA may propose that this MOA be amended, whereupon the parties to this MOA will consult for no more than thirty (30) days to consider such amendment. The amendment will be effective on the date a copy is signed by all of the original signatories. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with Stipulation VII.E, below.
2. Attachments to this MOA may be amended through consultation as prescribed in Stipulation I or Stipulation II, as appropriate, without amending the MOA proper.

E. TERMINATION

1. If this MOA is not amended as provided for in Stipulation D, or if either signatory party proposes termination of this MOA for other reasons, the signatory party proposing termination shall, in writing, notify the other parties to this MOA, explain the reasons for proposing termination, and consult with the other parties for at least thirty (30) days to seek alternatives to termination because the Undertaking no longer meets the definition set forth in 36 CFR § 800.16(y).
2. Should such consultation result in an agreement on an alternative to termination, then the parties shall proceed in accordance with the terms of that agreement.
3. Should such consultation fail, the signatory party proposing termination may terminate this MOA by promptly notifying the other parties to this MOA in writing. Termination hereunder shall render this MOA without further force or effect.
4. If this MOA is terminated hereunder, and if Caltrans determines that the undertaking will nonetheless proceed, then FHWA shall either consult in accordance with 36 CFR § 800.6 to develop a new MOA or request the comments of the ACHP pursuant to 36 CFR Part 800.

F. ANNUAL REPORTING

In addition to the documentation and reporting described in Stipulation II.B, Caltrans shall provide the parties to this agreement an annual update. Such updates shall include any scheduling changes proposed, any problems encountered, failures to adopt proposed mitigation measures, and any disputes and objections received in Caltrans' efforts to carry out the terms of this MOA. The update will be due no later than December 31 of each year, beginning December 31, 2019 and continuing annually thereafter throughout the duration of this MOA. At the request of any party to this MOA, or if deemed necessary at least on an annual basis, Caltrans shall ensure that one or more meetings are held to facilitate review and comments, and to resolve questions and comments.

G. DURATION OF THE MOA

The duration of this MOA shall be no more than five (5) years following the date of execution by the SHPO and Caltrans, or upon completion of the Undertaking, whichever comes first. If the terms are not satisfactorily fulfilled at that time, Caltrans shall consult with the signatories and concurring parties to extend it or to reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment of the MOA, or termination. In the event of termination, Caltrans will comply with Stipulations III through XI of the Section 106 PA if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

H. EFFECTIVE DATE

This MOA will take effect on the date that it has been executed by FHWA and SHPO.

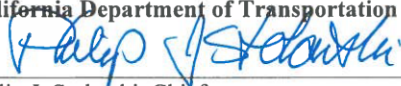
EXECUTION of this MOA by Caltrans and the SHPO, its filing with the ACHP in accordance with 36 CFR § 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR § 800.6(c), that this MOA is an agreement with the ACHP for purposes of Section 110(1) of the NHPA, and shall further evidence that Caltrans has afforded the ACHP an opportunity to comment on the Undertaking and its effects on historic properties, and that Caltrans has taken into account the effects of the Undertaking on historic properties.

MEMORANDUM OF AGREEMENT

**BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE SAN ANTONIO CREEK BRIDGE SCOUR MITIGATION
PROJECT ALONG HIGHWAY 1 AT PM 33.1, SANTA BARBARA COUNTY,
CALIFORNIA**

SIGNATORY PARTIES:

California Department of Transportation

By 
Philip J. Stolarski, Chief
Division of Environmental Analysis


Date

California State Historic Preservation Officer

By 
Julianne Polanco
State Historic Preservation Officer


Date

Appendix G USFWS Species List



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish And Wildlife Office

2493 Portola Road, Suite B

Ventura, CA 93003-7726

Phone: (805) 644-1766 Fax: (805) 644-3958



In Reply Refer To:

June 13, 2019

Consultation Code: 08EVEN00-2018-SLI-0489

Event Code: 08EVEN00-2019-E-01440

Project Name: San Antonio Creek Scour Mitigation

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

06/13/2019

Event Code: 08EVEN00-2019-E-01440

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[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment(s):

- Official Species List

06/13/2019

Event Code: 08EVEN00-2019-E-01440

1

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

06/13/2019

Event Code: 08EVEN00-2019-E-01440

2

Project Summary

Consultation Code: 08EVEN00-2018-SLI-0489

Event Code: 08EVEN00-2019-E-01440

Project Name: San Antonio Creek Scour Mitigation

Project Type: TRANSPORTATION

Project Description: Scour mitigation project to project State Route 1 San Antonio Creek Bridge

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.776006180114884N120.48519365122135W>



Counties: Santa Barbara, CA

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (CA - Santa Barbara County) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Endangered

06/13/2019

Event Code: 08EVEN00-2019-E-01440

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Fishes

NAME	STATUS
Unarmored Threespine Stickleback <i>Gasterosteus aculeatus williamsoni</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7002	Endangered

Insects

NAME	STATUS
El Segundo Blue Butterfly <i>Euphilotes battoides allyni</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3135	Endangered

Crustaceans

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

Flowering Plants

NAME	STATUS
Gambel's Watercress <i>Rorippa gambellii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
La Graciosa Thistle <i>Cirsium loncholepis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6547	Endangered
Lompoc Yerba Santa <i>Eriodictyon capitatum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/364	Endangered
Marsh Sandwort <i>Arenaria paludicola</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix H NMFS Species List

Appendix H • NMFS Species List

From: [NMFSWCRCA Specieslist - NOAA Service Account](#)
To: [Holmes, Karen@DOT](#)
Subject: Re: California Department of Transportation San Antonio Creek Scour Mitigation Project
Date: Thursday, June 13, 2019 10:20:51 AM

Receipt of this message confirms that NMFS has received your email to nmfswcrea.specieslist@noaa.gov. If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page (http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

From: Holmes_Karen@DOT
To: nmfsnwrcra.specieslist@noaa.gov
Subject: California Department of Transportation San Antonio Creek Scour Mitigation Project
Date: Thursday, June 13, 2019 10:20:00 AM

Hello,

I am requesting an official ESA species for those species under NMFS purview in California in the following quads.

Agency Name and Address:
California Department of Transportation
50 Higuera St.
San Luis Obispo, CA 93401

Point of Contact:
Karen Holmes
Senior Environmental Planner
Caltrans, District 5
karen.holmes@dot.ca.gov
(805) 542-4794

Quad Name **Orcutt**

Quad Number **34120-G4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office

562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -



Appendix I CDFW Species List

Appendix I • CDFW Species List



Selected Elements by Common Name California Department of Fish and Wildlife California Natural Diversity Database



CASMALIA, GUADALUPE, LOMPOC, LOS ALAMOS, ORCUTT, SANTA MARIA, SISQUOC, SURF, TWITCHELL DAM

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger	AMAJF04010	None	None	G5	S3	SC
<i>Taxidea taxus</i>						
American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Falco peregrinus anatum</i>						
aphanisma	PDCHE02010	None	None	G3G4	S2	1B.2
<i>Aphanisma blitoides</i>						
arroyo chub	AFCJB13120	None	None	G2	S2	SC
<i>Gila orcutti</i>						
arroyo toad	AAABB01230	Endangered	None	G2G3	S2S3	SC
<i>Anaxyrus californicus</i>						
beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
<i>Layia carnosa</i>						
beach spectaclepod	PDBRA10020	None	Threatened	G1	S1	1B.1
<i>Dithyrea maritima</i>						
black-flowered figwort	PDSCR1S010	None	None	G2?	S2?	1B.2
<i>Scrophularia atrata</i>						
Blochman's dudleya	PDCRA04051	None	None	G3T2	S2	1B.1
<i>Dudleya blochmaniae ssp. blochmaniae</i>						
Blochman's leafy daisy	PDAST3M5J0	None	None	G2	S2	1B.2
<i>Erigeron blochmaniae</i>						
Bolander's water-hemlock	PDAP10M051	None	None	G5T4	S2	2B.1
<i>Cicuta maculata var. bolanderi</i>						
burrowing owl	ABNSB10010	None	None	G4	S3	SC
<i>Athene cunicularia</i>						
California horned lark	ABPAT02011	None	None	G5T4Q	S4	
<i>Eremophila alpestris actia</i>						
California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
<i>Sternula antillarum browni</i>						
California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SC
<i>Rana draytonii</i>						
California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
<i>Cladium californicum</i>						
California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SC
<i>Ambystoma californiense</i>						

Appendix I • CDFW Species List

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Central Coast Arroyo Willow Riparian Forest	CTT61230CA	None	None	G3	S3.2	
<i>Central Coast Arroyo Willow Riparian Forest</i>						
Central Dune Scrub	CTT21320CA	None	None	G2	S2.2	
<i>Central Dune Scrub</i>						
Central Foredunes	CTT21220CA	None	None	G1	S1.2	
<i>Central Foredunes</i>						
Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
<i>Central Maritime Chaparral</i>						
chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<i>Senecio aphanactis</i>						
coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SC
<i>Phrynosoma blainvillii</i>						
coast patch-nosed snake	ARADB30033	None	None	G5T4	S2S3	SC
<i>Salvadora hexalepis virgulata</i>						
Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
<i>Coastal and Valley Freshwater Marsh</i>						
coastal goosefoot	PDCHE091Z0	None	None	G2	S2	1B.2
<i>Chenopodium littoreum</i>						
Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
<i>Lasthenia glabrata ssp. coulteri</i>						
crisp monardella	PDLAM18070	None	None	G3T2	S2	1B.2
<i>Monardella undulata ssp. crispa</i>						
Davidson's saltscall	PDCHE041T1	None	None	G5T1	S1	1B.2
<i>Atriplex serenana var. davidsonii</i>						
dune larkspur	PDRAN0B1B1	None	None	G4T2	S2	1B.2
<i>Delphinium parryi ssp. blochmaniae</i>						
Eastwood's brittle-leaf manzanita	PDERI041H4	None	None	G4T2	S2	1B.1
<i>Arctostaphylos crustacea ssp. eastwoodiana</i>						
Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<i>Nasturtium gambelii</i>						
Gaviota tarplant	PDAST4R0U3	Endangered	Endangered	G4G5T2	S2	1B.1
<i>Deinandra increscens ssp. villosa</i>						
hoary bat	AMACC05030	None	None	G5	S4	
<i>Lasiurus cinereus</i>						
Hoover's bent grass	PMPOA040M0	None	None	G2	S2	1B.2
<i>Agrostis hooveri</i>						
Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
<i>Horkelia cuneata var. sericea</i>						
La Graciosa thistle	PDAST2E1N0	Endangered	Threatened	G5T1	S1	1B.1
<i>Cirsium scariosum var. loncholepis</i>						

Appendix I • CDFW Species List

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
La Purisima manzanita <i>Arctostaphylos purissima</i>	PDERI041A0	None	None	G2	S2	1B.1
least Bell's vireo <i>Vireo bellii pusillus</i>	ABPBW01114	Endangered	Endangered	G5T2	S2	
Lompoc grasshopper <i>Trimerotropis occulens</i>	IORT36310	None	None	G1G2	S1S2	
Lompoc yerba santa <i>Eriodictyon capitatum</i>	PDHYD04040	Endangered	Rare	G2	S2	1B.2
mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	PDROS0W045	None	None	G4T1	S1	1B.1
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	PDFAB0F2X3	None	None	G5T2	S2	1B.2
monarch - California overwintering population <i>Danaus plexippus</i> pop. 1	IILEPP2012	None	None	G4T2T3	S2S3	
Morro Bay blue butterfly <i>Plebejus icarioides moroensis</i>	IILEPG801B	None	None	G5T2	S2	
northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S3	Control Scri
Northern Coastal Salt Marsh <i>Northern Coastal Salt Marsh</i>	CTT52110CA	None	None	G3	S3.2	
pale-yellow layia <i>Layia heterotricha</i>	PDAST5N070	None	None	G2	S2	1B.1
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SC
Refugio manzanita <i>Arctostaphylos refugioensis</i>	PDERI041B0	None	None	G3	S3	1B.2
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	PDBRA1M114	None	None	G5T3	S3	4.3
San Bernardino aster <i>Symphyotrichum defoliatum</i>	PDASTE80C0	None	None	G2	S2	1B.2
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	AMAFF08041	None	None	G5T3T4	S3S4	SC
San Luis Obispo monardella <i>Monardella undulata</i> ssp. <i>undulata</i>	PDLAM180X0	None	None	G2	S2	1B.2
sand mesa manzanita <i>Arctostaphylos rudis</i>	PDERI041E0	None	None	G2	S2	1B.2
Santa Barbara honeysuckle <i>Lonicera subspicata</i> var. <i>subspicata</i>	PDCPR030R3	None	None	G5T2?	S2?	1B.2
Santa Ynez groundstar <i>Ancistrocarphus keilii</i>	PDASTD5020	None	None	G1	S1	1B.1

Appendix I • CDFW Species List

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
seaside bird's-beak <i>Cordylanthus rigidus ssp. littoralis</i>	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
short-lobed broomrape <i>Orobanche parishii ssp. brachyloba</i>	PDORO040A2	None	None	G4?T4	S3	4.2
silver-haired bat <i>Lasiorycteris noctivagans</i>	AMACC02010	None	None	G5	S3S4	
Southern California Coastal Lagoon <i>Southern California Coastal Lagoon</i>	CALE1220CA	None	None	GNR	SNR	
southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	ABPBX91091	None	None	G5T3	S3	
Southern California Steelhead Stream <i>Southern California Steelhead Stream</i>	CARE2310CA	None	None	GNR	SNR	
Southern California Threespine Stickleback Stream <i>Southern California Threespine Stickleback Stream</i>	CARE2320CA	None	None	GNR	SNR	
Southern Cottonwood Willow Riparian Forest <i>Southern Cottonwood Willow Riparian Forest</i>	CTT61330CA	None	None	G3	S3.2	
southern curly-leaved monardella <i>Monardella sinuata ssp. sinuata</i>	PDLAM18161	None	None	G3T2	S2	1B.2
Southern Vernal Pool <i>Southern Vernal Pool</i>	CTT44300CA	None	None	GNR	SNR	
Southern Willow Scrub <i>Southern Willow Scrub</i>	CTT63320CA	None	None	G3	S2.1	
steelhead - southern California DPS <i>Oncorhynchus mykiss irideus pop. 10</i>	AFCHA0209J	Endangered	None	G5T1Q	S1	
straight-awned spineflower <i>Chorizanthe rectispina</i>	PDPGN040N0	None	None	G2	S2	1B.3
surf thistle <i>Cirsium rhotophilum</i>	PDAST2E2J0	None	Threatened	G1	S1	1B.2
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SC
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SC
two-striped gartersnake <i>Thamnophis hammondi</i>	ARADB36160	None	None	G4	S3S4	SC
unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	AFCPA03011	Endangered	Endangered	G5T1	S1	FP

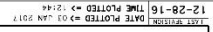
Appendix I • CDFW Species List

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Vandenberg monkeyflower	PDSCR1B381	Endangered	None	G1	S1	1B.1
<i>Diplacus vandenbergensis</i>						
vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Branchinecta lynchi</i>						
western pond turtle	ARAAD02030	None	None	G3G4	S3	SC
<i>Emys marmorata</i>						
western red bat	AMACC05060	None	None	G5	S3	SC
<i>Lasiurus blossevillei</i>						
western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SC
<i>Charadrius alexandrinus nivosus</i>						
western spadefoot	AAABF02020	None	None	G3	S3	SC
<i>Spea hammondi</i>						
yellow warbler	ABPBX03010	None	None	G5	S3S4	SC
<i>Setophaga petechia</i>						
Yuma myotis	AMACC01020	None	None	G5	S4	
<i>Myotis yumanensis</i>						

Record Count: 85

Appendix J Preliminary Layout Map

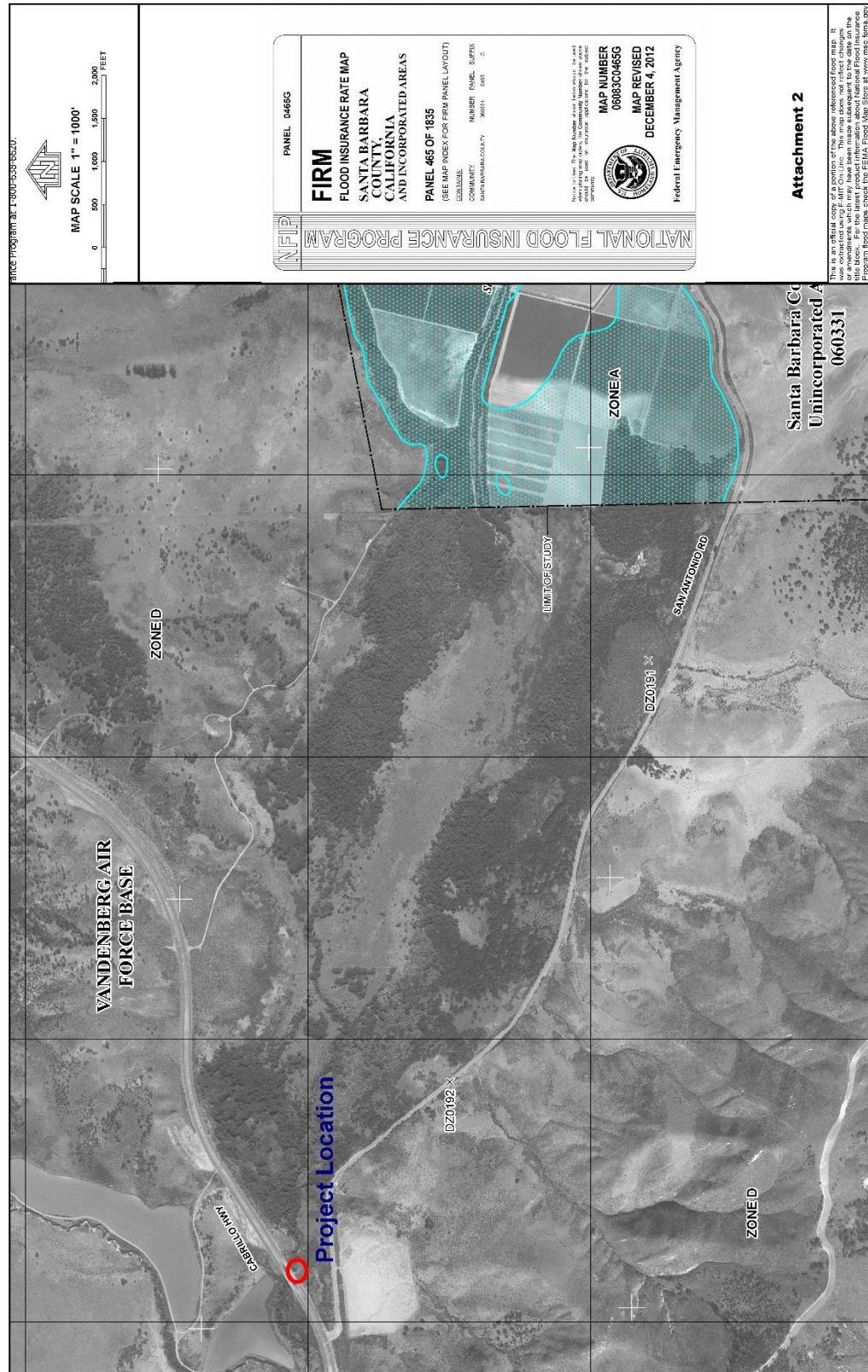






Appendix K Flood Insurance Rate Map (FIRM)







List of Technical Studies

Hazardous Waste Report, August 24, 2017
Paleontology Review, August 24, 2017
Water Quality Assessment, August 24, 2017
Floodplain and Fish Passage Analysis Memo, August 30, 2017
Air and Noise Studies Report, September 8, 2017
Visual Assessment Report, September 13, 2017
Natural Environment Study Report, May 5, 2017
Historic Property Survey Report, June 18, 2018
Location Hydraulic Study, January 24, 2019

To obtain a copy of one or more of these technical studies/reports or the Initial Study/Environmental Assessment, please send your request to the following email address: info-d5@dot.ca.gov or call (805) 568-0858

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).

