Gaviota Culvert Replacement Project

On US 101 in Santa Barbara County
05-SB-101-45.5
0512000068
SCH# 2018071001

Initial Study
with Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

February 2019

Caltrans

General Information About This Document

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The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration for the proposed project located in Santa Barbara County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document describes why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study circulated to the public for 30 days from July 2, 2018 to July 31, 2018. Comments received during this period are included in Chapter 4. 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. Additional copies of this document and the related technical studies are available for review at:

Caltrans District 5, 50 Higuera Street, San Luis Obispo, CA 93401; and

Goleta Branch Library, 400 N Fairview Avenue, Goleta, CA 93117.

The document can also be downloaded at the following website**:** http://www.dot.ca.gov/d5/

What Happens After This?

The proposed project has completed environmental compliance after the circulation of this document. When funding is approved, Caltrans may design and construct all or part of the project.

Alternative Formats:

For individuals with sensory disabilities, this document is 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: Lara Bertaina, Senior Environmental Planner, 50 Higuera Street, San Luis Obispo, CA 93401, (805) 542-4603 or TTY (805) 549-303, or use California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

SCH# 2018071001
05-SB-101-45.5
0512000068

Replace Culvert on US 101 in Santa Barbara County at PM 45.5

INITIAL STUDY
with Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation

2/28/19
Date of Approval

Lara Bertaina
Central Coast Environmental Branch Manager
California Department of Transportation
CEQA Lead Agency

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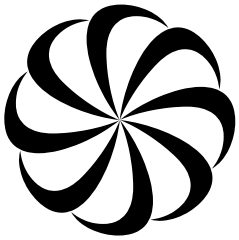


Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to replace an existing Reinforced Concrete Box/Reinforced Concrete Pipe (RCB/RCP) culvert on US 101 in Santa Barbara County at Post Mile (PM) 45.5 near Gaviota State Park.

Determination

This Mitigated Negative Declaration is included to give notice to interested agencies and the public that Caltrans' has adopted a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final.

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

The proposed project would have no effect on: cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, population and housing, public services, recreation, or tribal cultural resources.

In addition, the proposed project would have no significant effect on: aesthetics, agriculture, air quality, hydrology and water quality, migratory birds, threatened and endangered species, noise, transportation/traffic, nor utilities and service systems.

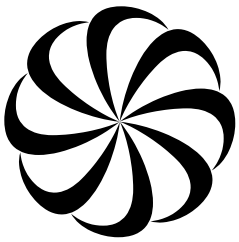
In addition, the proposed project would have no significantly adverse effect on wetlands and waters or sensitive coastal habitat because the following mitigation measures would reduce potential effects to insignificance:

- The impacts would be mitigated by replacing wetlands and waters at a 1:1 ratio for temporary impacts.
- The impacts would be mitigated by replacing wetlands and waters at a 3:1 ratio for permanent impacts.
- The impacts would be mitigated by replacing Coastal Scrub habitat at a 1:1 ratio for temporary impacts.
- The impacts would be mitigated by replacing Coastal Scrub habitat at a 2:1 ratio for permanent impacts.

2/28/19

Date

Environmental Planner
California Department of Transportation



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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to replace an existing 6'X6' Reinforced Concrete Box/6' Reinforced Concrete Pipe (RCB/RCP) culvert on US 101 in Santa Barbara County at PM 45.5 near Gaviota State Park.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to restore the culvert and wingwalls at this location to functioning order.

1.2.2 Need

The project is needed because the RCB/RCP culvert has excessive cracking, spalling, and moderate scour behind and underneath the existing left inlet wingwall.

1.3 Project Description

Caltrans proposes to replace an existing 6'X6' Reinforced Concrete Box/6' Reinforced Concrete Pipe (RCB/RCP) culvert on US 101 in Santa Barbara County at PM 45.5 near Gaviota State Park.

In Santa Barbara County, US 101 at Post Mile (PM) 45.5 is a four-lane divided highway and is the main north/south route primarily serving interregional traffic. Although US 101 is a north-south route, in this area the highway aligns east-to-west and is on flat terrain between the Pacific Ocean and the Santa Ynez Mountains. **Figure 1-1** shows the project vicinity and location.

The culvert is located in a drainage identified as Cañada del Barro on the Gaviota Coast, which drains water from the Santa Ynez Mountains, north of the project site. The culvert transitions from RCB to RCP approximately half way along the length of the culvert and is approximately 475 feet long. The replacement culvert would be approximately 500 feet long and composed of RCP only. It would include Rock Slope Protection (RSP), an end wall and wing walls at the outlet, and a headwall at the inlet.

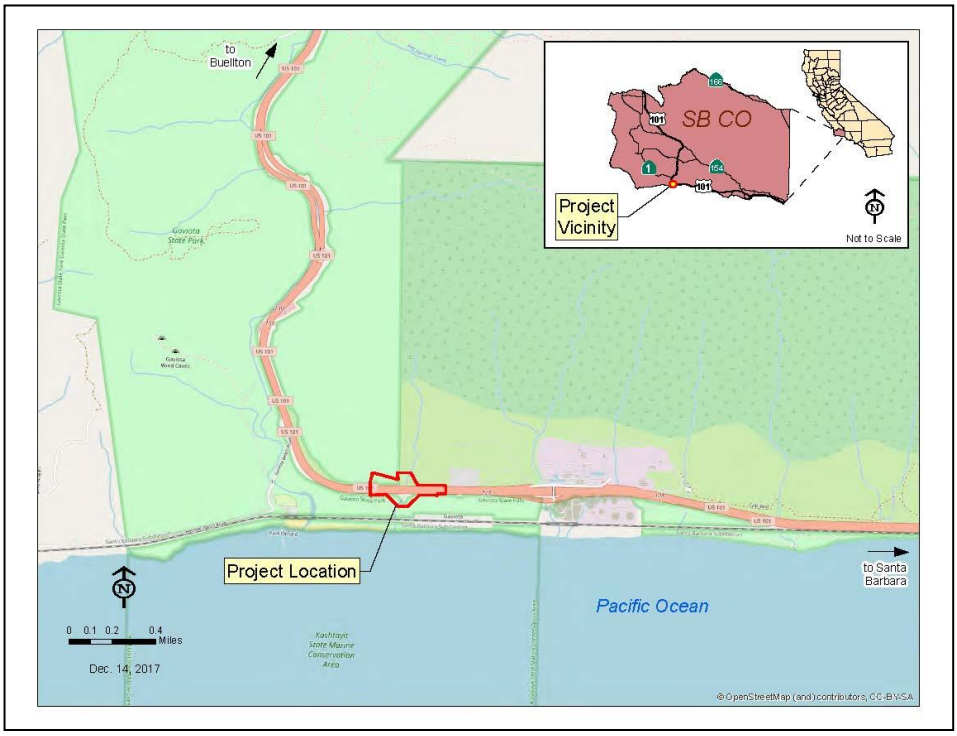


Figure 1-1: Project Vicinity and Location Map

1.4 Project Alternatives

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The alternatives are Alternative 1 and the No-Build Alternative.

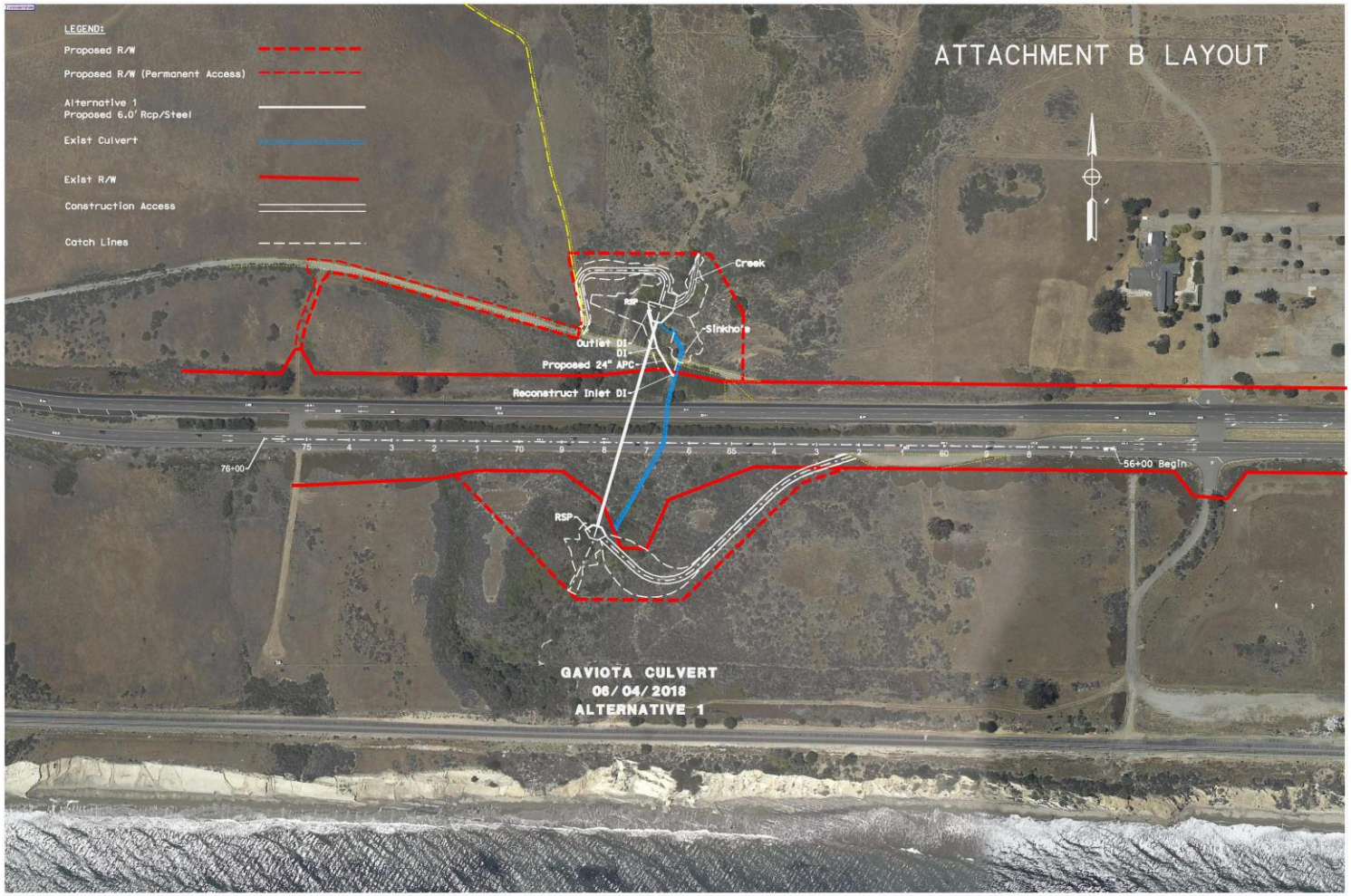
1.4.1 Build Alternatives

One build alternative has been identified that will meet the project purpose and need, minimize environmental impacts, and have longevity. This alternative includes using a jack and bore construction method to replace the existing culvert with a reinforced concrete pipe (RCP) on a slightly new alignment. In order to construct the project, access roads to both the inlet and outlet would be necessary. Upon completion of the new culvert, inlet and outlet head walls and wing walls would be constructed, rock slope protection (RSP) would be placed at the culvert outlet, the existing RCB/RCP culvert would be abandoned in place, and the access roads would be regraded and replanted with appropriate native habitat. Partial diversion of the stream would likely be required to allow the work area to remain dry during construction of the culvert, headwalls, and wingwalls. A new Drainage Inlet (DI) with pipe riser would be connected to the new culvert on the northbound median shoulder. The existing DI and riser would be sealed off and abandoned. **See Figure 1-2** and **1-3**.

This project contains a number of standardized project measures that 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.

1.4.2 No-Build (No-Action) Alternative

This alternative would result in the culvert remaining in place. As equipment access is currently impossible, maintenance of the culvert would not occur, and the culvert would continue to deteriorate.


ATTACHMENT B LAYOUT
LEGEND:
Proposed R/W
Proposed R/W (Permanent Access)
Alternative 1
Proposed 6.0' Rcp/Steel
Exist Culvert
Exist R/W
Construction Access
Catch Lines
Creek
RSP
Sinkhole
Outlet DI-
DI-
Proposed 24" APC-
Reconstruct Inlet DI-
76+00
56+00 Begin
RSP
GAVIOTA CULVERT
06/04/2018
ALTERNATIVE 1

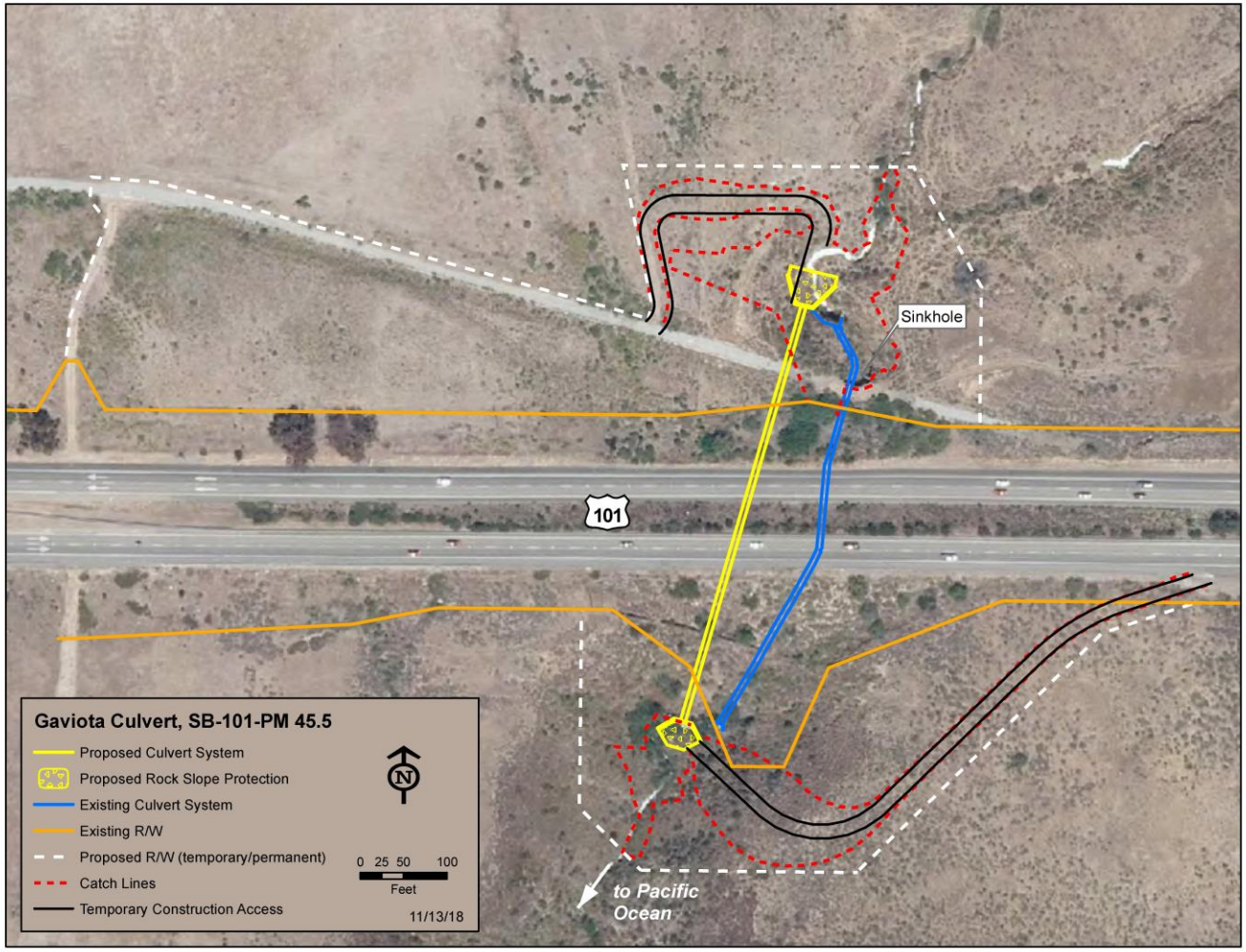
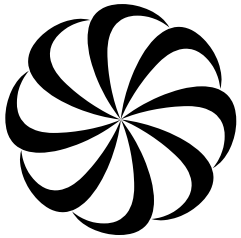


Figure 1-2: Project Footprint



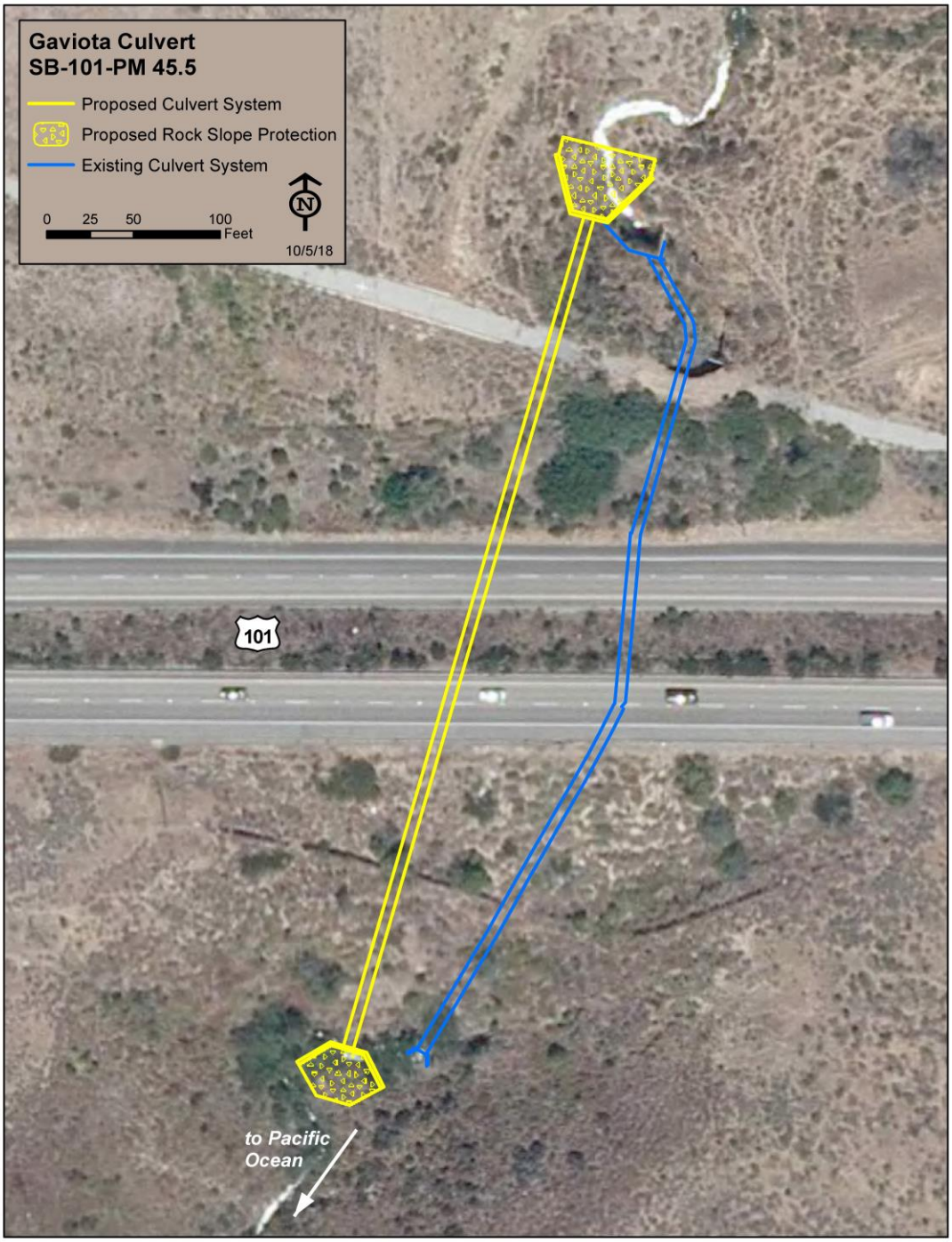
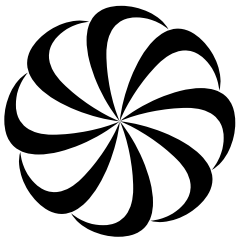


Figure 1-3: Location of Proposed and Existing Culvert Systems



1.5 Alternatives Considered but Eliminated from Further Discussion

Caltrans considered an alternative that would preserve the existing RCB/RCP culvert in-place by welding a steel lining inside the culvert and backfilling the space between the two with grout. The outlet would require excavation, construction of a new headwall, and placement of RSP as well as the repair or replacement of the medial DI and pipe riser. Caltrans' Project Development Team (PDT) dropped this alternative from further consideration due to safety concerns for the contractors. In order to construct this alternative, the contractor would be required to weld the liner in a confined space and inspectors would have to work in the same confined space. Additionally, this alternative would not extend the life of the culvert as long as replacing it would and there is a minimal cost savings (approximately $150,000) when compared to full replacement of the culvert.

1.6 Permits and Approvals Needed

Construction of the project within this drainage will be subject to permitting requirements, as listed below in **Table 1-1**.

Table 1-1: Permits and Approvals

Agency	Permit/Approval	Status
Santa Barbara County	Coastal Development Permit	Application will be submitted upon completion of environmental review process.
US Army Corps of Engineers	401	Application will be submitted upon completion of environmental review process.
Regional Water Quality Control Board	404	Application will be submitted upon completion of environmental review process.
California Department of Fish and Wildlife	1600	Application will be submitted upon completion of environmental review process.
US Fish & Wildlife	Biological Opinion	Biological Opinion received on February 15, 2019
California State Parks	Section 4(f) Concurrence	Coordination under way. Concurrence required prior to project approval.

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. So, there is no further discussion of these issues in this document.

Aesthetics: The project would not alter the existing view from any viewpoints. (Visual Impact Analysis, 2017)

Agriculture and Forest Resources: The project footprint will not affect any agricultural activities within the project area. Forest resources are not present within the vicinity of the project.

Air Quality: The project would not affect air quality with the incorporation of standard construction practices. (Air Quality Study Memorandum, 2017)

Geology and Soils: The geology and soils will affect how the project is constructed, however will not be affected by the project. (Preliminary Geotechnical Report, 2004)

Hazards and Hazardous Materials: There are no hazardous waste sites nor businesses commonly associated with hazardous waste generation near the project that would have a potential for impacting this type of project.

Upon completion of the Aerially Deposited Lead (ADL) analysis, if ADL is found within the project limits during future analysis, a Lead Compliance Plan will be required and the soil will be disposed of as required by Caltrans Standard Specifications. (Scoping Initial Site Assessment, 2015)

Hydrology and Water Quality: Implementation of Best Management Practices as described in Caltrans' Standard Specifications will prevent any effects to water quality. No 100-year floodplain is present within the project limits. (Water Quality Study Memorandum, 2017)

Land Use and Planning: The project would not conflict with existing or proposed land use designations as it will function in the same manner and approximate location as the existing culvert. (Santa Barbara Land Use Plan, 2014)

Mineral Resources: Mineral resources are not present within the project limits. (Preliminary Geotechnical Report, 2004)

Noise: Operation of the project would not create noise. Construction Standard Specifications for Noise would limit the effect of noise in the area. (Noise Study Memorandum, 2017)

Population and Housing: The project would have no effect on population and housing as the replacement culvert will operate in the same manner and approximate location as the existing culvert. No relocations will be necessary. No additional housing will be needed to accommodate construction of the project.

Public Services: No public services will be affected by this project. Any required lane closures during construction would be coordinated with local providers and detours would be provided. A Transportation Management Plan will be developed as a standard construction measure to avoid any such impacts. (Draft Project Report, 2018)

Recreation: The project is located within the boundaries of the Gaviota State Park, however the area where the culvert lies is inaccessible to the public. In order to construct the project, access roads to the inlet and outlet of the culvert would need to be constructed. These access roads would remain in place for maintenance of the culvert. The project would not affect park use or access.

Transportation/Traffic: The project would have no permanent effect on traffic. During construction, Caltrans would implement the Transportation Management Plan developed for the project. (Draft Project Report, 2018)

Utilities and Service Systems: Utilities identified within the project area will not be affected by construction or operation of the project. They will be preserved in-place. Construction of the project will not require expansion of any existing utilities. (Draft Project Report, 2018)

2.1 Human Environment

2.1.1 Coastal Zone

Regulatory Setting

The project has the potential to affect resources protected by the Coastal Zone Management Act (CZMA) of 1972. The CZMA is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA: They include the protection and expansion of public access and recreation; the protection, enhancement and restoration of environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty, and the protection of property and life from coastal hazards. The California Coastal Commission is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegated power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local government to enact their own local coastal programs (LCPs). This project is subject to the County of Santa Barbara's local coastal program. LCPs contain the ground rules for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will be needed as well. The Federal Consistency Certification process will be initiated prior to the final environmental document and will be completed to the maximum extent possible during the NEPA process.

Affected Environment

The project lies within the Coastal Zone and is governed by Santa Barbara County's approved Coastal Land Use Plan (1982, Republished May 2014).

The project lies within the Gaviota Coast Planning Area of Santa Barbara County. The land uses immediately surrounding and within the project footprint include recreational (REC), agricultural (A-11-320) and transportation corridor (TC). South of the highway at the project site, the county has designated a "View Corridor" overlay district and portions of the same area have an "Environmentally Sensitive Habitat Area (ESHA)" overlay designation. The Coastal Land Use Plan further identifies Cañada del Barro as an intermittent stream corridor.

Gaviota State Park owns the property surrounding the project site. The Gaviota State Beach General Plan (July 1979) does not identify a land use designation for this area, however access at the project site is limited due to lack of infrastructure (parking, trails, beach access, etc.). **Table 2-1** summarizes Coastal policies and the project's adherence to such policies.

Table 2-1: Coastal Act Policy Discussion

Policy	Discussion
Coastal Act Policy 30254. New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this Division;… Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.	The project includes replacement of an existing culvert and would maintain existing hydraulic capacity. New development would not be required nor accommodated. Replacement is necessary in order to prevent failure and subsequent closure of US 101 and maintain access for essential public services, including coastal access. New development would not be needed to support the project; therefore, a special district would not be formed.

Policy	Discussion
Santa Barbara County LCP Policy 2-11. All development, including agriculture, adjacent to areas designated on the land use plan or resource maps as environmentally sensitive habitat areas, shall be regulated to avoid adverse impacts on habitat resources. Regulatory measures include, but are not limited to, setbacks, buffer zones, grading controls, noise restrictions, maintenance of natural vegetation, and control of runoff.	ESHA has been identified on the south side of US 101. The project has been designed to minimize impacts to ESHA by carefully designing the least impactful access roads to the culvert outlet and by limiting the largest impact area (the jacking pit) to the culvert inlet (north of the highway) where ESHA has not been designated. Additionally, Caltrans would implement Construction Best Management Practices (BMPs), comply with conditions on 1600, 401, and 404 permits and adhere to dry season work windows (May 15 through October 15).
Coastal Act Policy 30253. New development shall: (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.	The project would minimize risks to life and property by averting culvert failure and subsequent failure of US 101 at this location. Construction BMPs, NPDES permit compliance, and adherence to work windows would assure the stability of the construction site and minimize erosion as well as avoid contributing to erosion, geologic instability, and destruction of the site or surrounding area. The project is proposed in order to assure the stability and structural integrity of an essential public service (US 101). The project is located inland of coastal bluffs and would not significantly change flow patterns.
Coastal Act Policy 30236. Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects; (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or; (3) developments where the primary function is the improvement of fish and wildlife habitat.	The project would provide protection to the existing US 101 highway, an essential public service that provides access to the beaches in this area. Mitigation measures would include 3:1 wetland replacement for permanent impacts (see **W-7** and **W-8** in **Section 2.2.2**). If water were present during construction, Caltrans would dewater the area during construction using standard dewatering practices that protect water quality and habitat.

Policy	Discussion
Coastal Act Policy 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.	The project, which proposes to replace an existing, failing culvert, is located in a view corridor; however, it is not visible to the travelling public on the highway or from the water due to existing terrain and vegetation.
Santa Barbara LCP Policy 3-13: Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.	Caltrans has minimized the area of disturbance for access roads by studying different routes to both the inlet and outlet of the culvert and moving forward with the access roads that have the smallest footprint.
Santa Barbara LCP Policy 3-15: For necessary grading operations on hillsides, the smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time. The clearing of land should be avoided during the winter rainy season and all measures for removing sediments and stabilizing slopes should be in place before the beginning of the rainy season.	Construction BMPs would be in place throughout construction in order to minimize open areas. Construction would only occur outside of the rainy season. Caltrans would comply and ensure compliance with NPDES and SWPPP requirements during construction.
Santa Barbara LCP Policy 3-17: Temporary vegetation, seeding, mulching, or other suitable stabilization method shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized immediately with planting of native grasses and shrubs, appropriate nonnative plants, or with accepted landscaping practices.	Caltrans would comply with construction BMPs and stormwater prevention standards pursuant to Caltrans' statewide NPDES permit during construction of the project.
Santa Barbara LCP Policy 3-19: Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.	Avoidance measure **W-3** in **Section 2.2.2** requiring BMPs during construction, will provide adequate protection of wetlands. Caltrans would conduct construction during the dry season (May 15 to October 15). Additionally, Caltrans will secure 401, 404, and 1602 permits and implement permit conditions.

Policy	Discussion
Santa Barbara LCP Policy 4-9: Structures shall be sited and designed to preserve unobstructed broad views of the ocean from Highway #101, and shall be clustered to the maximum extent feasible.	The project, which would replace an existing culvert, is located in a view corridor; however, it is not visible to the travelling public on the highway or from the water due to existing terrain and vegetation. The culvert would remain below the US 101 sightline.
Coastal Act Policy 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	The project would fill 0.03 acre of an 81 square-foot wetland due to the need for head and wing walls and RSP. There is no feasible alternative location for the project; it is located within an existing natural drainage. The project has been designed to minimize impacts to ESHA by carefully designing the least impactful access roads to the culvert outlet and by limiting the largest impact area (the jacking pit) to the culvert inlet (north of the highway) where ESHA has not been designated. Mitigation would be provided as outlined in **W-7** and **W-8** in **Section 2.2.2** in order to alleviate impacts on the in-stream wetlands. Construction BMPs would be employed to minimize effects to water quality and wetland degradation. Caltrans would comply with conditions outlined in the NPDES, 401, 404, and 1602 permits.
Coastal Act Policy 30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative and where feasible, mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:… (5) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.	The project would fill 0.03 acre of an 81 square-foot wetland due to the need for head and wing walls and RSP. There is no feasible alternative location for the project; it is located within an existing natural drainage. The project has been designed to minimize impacts to ESHA by carefully designing the least impactful access roads to the culvert outlet and by limiting the largest impact area (the jacking pit) to the culvert inlet (north of the highway) where ESHA has not been designated. Mitigation would be provided as outlined in **W-7** and **W-8** in **Section 2.2.2** in order to alleviate impacts on the in-stream wetlands. The project would be considered an incidental public service as it is being undertaken by Caltrans, a public agency, to protect US 101 from failure due to erosion and/or culvert failure.

Policy	Discussion
Coastal Act Policy 30607.1 Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum, either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measures shall not be required for temporary or short-term fill or diking: provided, that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time.	Caltrans would provide compensatory mitigation at a ratio of 3:1 for permanent impacts and 1:1 for temporary impacts to wetlands. See **W-7** and **W-8** in **Section 2.2.2**.
Coastal Act Policy 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.	Caltrans has identified the smallest possible footprint in order to construct the project and will provide native planting to enhance existing habitat areas upon completion of the project.
Santa Barbara Coastal Policy 9-6: All diking, dredging, and filling activities shall conform to the provisions of Sections 30233 and 30607.1 of the Coastal Act. Dredging, when consistent with these provisions and where necessary for the maintenance of the tidal flow and continued viability of the wetland habitat or for flood control purposes, shall be subject to the following conditions: **a.** Dredging shall be prohibited in breeding and nursery areas and during periods of fish migration and spawning. **b.** Dredging shall be limited to the smallest area feasible. **c.** Designs for dredging and excavation projects shall include protective measures such as silt curtains, diapers, and weirs to protect water quality in adjacent areas during construction by preventing the discharge of	Avoidance, Minimization, and Mitigation Measures have been incorporated into the project in order to comply with the policy. They are listed here and described in more detail below. **a.** Measure **W-1** limits construction access to the smallest area necessary and can be found in **Section 2.2.2**. **b.** Measure **W-2** addresses timing of construction and can be found in **Section 2.2.2**. **c.** Measures **W-2**, **W-3**, **W-4**, **W-5**, (See **Section 2.2.2**) and **TES-15** (See **Section 2.2.3**) address construction

Policy	Discussion
refuse, petroleum spills, and unnecessary dispersal of silt materials. During permitted dredging operations, dredge spoils may only be temporarily stored on existing dikes or on designated spoil storage areas, except in the Atascadero Creek area (including San Jose and San Pedro Creeks) where spoils may be stored on existing storage areas as delineated on the Spoil Storage Map, dated February, 1981. (Projects which result in discharge of water into a wetland require a permit from the Regional Water Quality Control Board.)	timing requirements, BMP requirements, spill prevention requirements, erosion control requirements, and water diversion requirements, respectively.
Santa Barbara LCP Policy 9-18: Development shall be sited and designed to protect native grassland areas.	Native grasslands have not been identified within the project impact area and Caltrans has minimized the grading to the extent feasible and will employ high visibility fencing to protect nearby sensitive areas from disturbance during construction.
Santa Barbara LCP Policy 9-36: When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of roads or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees.	Caltrans has minimized the area of disturbance for access roads by studying different routes to both the inlet and outlet of the culvert and moving forward with the access roads that have the smallest footprint. In addition, the jacking pit would be located on the inland (north) side of the project in order to reduce the impact area to native vegetation. The designated ESHA overlay is limited to the south side of the highway. Caltrans would place high visibility fencing around ESHA to protect areas from disturbance during construction. NPDES and construction BMPs would be employed to minimize runoff and erosion.
Santa Barbara LCP Policy 9-37: The minimum buffer strip for major streams in rural areas, as defined by the land use plan, shall be presumptively 100 feet, and for streams in urban areas, 50 feet. These minimum buffers may be adjusted upward or downward on a case-by-case basis. The buffer shall be established based on an investigation of the following factors and after consultation with the Department of Fish and Game and Regional Water Quality Control Board in order to protect the biological productivity and water quality of streams: 1) soil type and stability of stream corridors; 2) how surface water filters into the ground;	Potentially inconsistent due to the nature of the project. Wing walls and RSP would be necessary in order to support the integrity of the new culvert system. The project proposes to replace an existing, failing culvert that conveys water under US 101 along an existing, natural ephemeral drainage. Caltrans has minimized the area of disturbance for access roads by studying different routes to both the inlet and outlet of the culvert and moving forward with the access roads that have the smallest footprint. In addition, the jacking pit would be located

Policy	Discussion
3) slope of the land on either side of the stream; and 4) location of the 100-year flood plain boundary. Riparian vegetation shall be protected and shall be included in the buffer. Where riparian vegetation has previously been removed, except for channelization, the buffer shall allow for the reestablishment of riparian vegetation to its prior extent to the greatest degree possible.	on the inland (north) side of the project in order to reduce the impact area to native vegetation. The designated ESHA overlay is limited to the south side of the highway. Caltrans would place high visibility fencing around ESHA to protect areas from disturbance during construction. NPDES and construction BMPs would be employed to minimize runoff and erosion.
Santa Barbara LCP Policy 9-38: No structures shall be located within the stream corridor except: public trails, dams for necessary water supply projects, flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development; and other development where the primary function is for the improvement of fish and wildlife habitat. Culverts, fences, pipelines, and bridges (when support structures are located outside the critical habitat) may be permitted when no alternative route/location is feasible. All development shall incorporate the best mitigation measures feasible.	Support structures would be placed within a wetland. There is no feasible alternative location for the project because it follows a natural drainage pattern and eliminates erosion associated with the existing failing culvert. All feasible avoidance, minimization, and mitigation measures would be employed.
Santa Barbara LCP Policy 9-40: All development, including dredging, filling, and grading within stream corridors, shall be limited to activities necessary for the construction of uses specified in Policy 9-38. When such activities require removal of riparian plant species, revegetation with local native plants shall be required except where undesirable for flood control purposes. Minor clearing of vegetation for hiking, biking, and equestrian trails shall be permitted.	Caltrans proposes to provide native plants from local sources for revegetation.
Santa Barbara LCP Policy 9-41: All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.	Caltrans would employ BMPs and comply with SWPPP requirements.

Avoidance, Minimization, and/or Mitigation Measures

Measures have been incorporated into the project as listed in the **Table 2-1** and further described in **Sections 2.2.1**, **2.2.2**, and **2.2.3**. These measures are designed to avoid, minimize, and mitigate the project's effects on sensitive coastal resources.

2.2 Biological Environment

2.2.1 Natural Communities

Regulatory Setting

This section discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

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. Wetlands and other waters are also discussed below.

Affected Environment

The following information is summarized from the Natural Environment Study (NES) for the Gaviota Culvert Replacement, May 2018 and updated using the NES Addendum, November 2018. Natural communities are mapped in **Figure 2-1**. A description of the natural communities/habitats present within the biological study area (BSA) follows.

The culvert in need of replacement was built to convey storm water runoff that flows through Cañada del Barro, under US 101 and toward the Pacific Ocean. Cañada del Barro is an intermittent, ephemeral drainage that conveys runoff from the foothills of the Santa Ynez Mountains to the Pacific Ocean. Cañada del Barro remains a dry creek bed, on both sides of US 101 throughout most or all of the year. Following the steep slopes up toward the foothills on the north side of US 101, the vegetation and soils in Cañada del Barro are drier. At the culvert outlet, on the south side of US 101, the vegetation is slightly moister due to the concentrated moisture from highway runoff.

The dominant plant community within the biological study area corresponds to central coastal scrub and is dominated by California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), and black sage (*Salvia mellifera*). Coastal scrub vegetation may support habitat for certain special-status plant species, reptile species, and various nesting bird species. Coastal scrub vegetation within the study area can be further sub-divided into "community alliances," as listed below.

Coyote Brush scrub *(Baccharis pilularis* Shrubland Alliance): 0.65 acre identified within the study area on the south side of US 101.

California sagebrush scrub (*Artemisia California* Shrubland Alliance): 5.2 acres identified within the study area on both sides of US 101.

Giant wild rye grassland (*Elymus condensatus* Herbaceous Alliance): 0.98 acre identified within the study area on both sides of US 101.

Poison oak scrub (*Toxicodendron diversilobum* Shrubland Alliance):0.58 acre identified within the study area on both sides of US 101.

Sawtooth golden bush scrub (*Hazardia squarrosa* Shrubland Alliance):0.16 acre identified within the study area on the north side of US 101.

Black sage scrub (*Salvia mellifera* Shrubland Alliance):0.23 acre identified within the study area on the north side of US 101.

Arroyo willow thicket (*Salix lasiolepis*) shrubland is also found within the biological study area. 0.44 acre of arroyo willow thicket occurs at Cañada del Barro, near the culvert inlet and failing outlet. The woodland is dominated by a dense growth (thicket) of arroyo willow consisting of 16-20 trees total. Other plant species observed within the arroyo willow thicket include poison hemlock (*Conium maculatum*), California figwort (*Scrophularia californica*), and mule fat (*Baccharis salicifolia*).

Arroyo willow thickets provide nesting habitat for a variety of local bird species including Western scrubjay (*Aphelocoma californica*), ash-throated flycatcher (*Myiarchus cinerascens*) and bushtit (*Psaltriparus minimus*). Although the arroyo willow thicket provides the bulk of the potential bird nesting habitat within the biological study area, no nesting birds were observed within this thicket, likely due to its narrow profile and close proximity to US 101, during breeding bird surveys for this project.

Approximately 0.30 acre of wild oats grassland (*Avena barbata*) occur within the project study area. This grassland has been known to include purple needlegrass, a sensitive species; however, no true stands were identified within the study area. Wild oats grasslands within the biological study area include introduced grasses such as ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), and red brome (*Bromus madritensis* ssp. *rubens)*). Various annual forbs also occur as associate species, such as burclover (*Medicago polymorpha*) and western vervain (*Verbena lasiostachys*).

Annual non-native grasslands can support quality habitat for various sensitive species. Annual non-native grasslands provide little cover for wildlife, yet numerous species do forage, and several species breed, in this habitat. Small mammals such as California ground squirrel (*Otospermophilus beecheyi*), deer mice (*Peromyscus maniculatus*), and Botta's pocket gophers (*Thomomys bottae*) are common residents in annual grasslands in central California. Larger mammals such as coyotes (*Canis latrans*) occasionally forage in these areas as well. A variety of bird species use annual grasslands as foraging habitat including mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), and western kingbird (*Tyrannus verticalis*).

Ruderal habitat occurs in areas that are regularly disturbed by human activities. Plants growing in these areas are dominated by non-native weedy and/or invasive species tolerant of disturbed conditions (e.g., compacted soils, maintained roadsides, etc).

Ruderal/disturbed is the dominant community and occupies approximately 7.33 acres of the biological study area including at the edges of US 101 between the road shoulders and fence lines, a significant portion of the upland habitat on the hillsides above US 101, and portions of the coastal terrace on the coast side of US 101.

Dominant species include Italian ryegrass (*Fescuta perennis*), brome grasses (*Bromus* spp.), wild oat (*Avena* spp.), and associate species such as wild radish (*Raphanus sativus*), Italian thistle (*Carduus pycnocephalus*), fountain grass (*Pennisetum setaceum*), yellow star thistle (*Centaurea solstitalis*), and jimsonweed (*Datura wrightii*). Dense, high-growing (>4 ft) black mustard (*Brassica nigra*) wild radish, and fennel (*Foeniculum vulgare*) occur across a significant portion of the coastal terrace on the south side of US 101 and hillsides on the north side of US 101.

Considering the low habitat value of this vegetation and that a large portion of it is subjected to vehicular disturbances, ruderal/disturbed areas of the biological study area have virtually no potential to support habitat for special-status species; however, these areas can be used during dispersal and for movement during foraging in adjacent habitats.

The location of the Gaviota Culvert Replacement project does not represent a core habitat area or key migratory pathway for regional wildlife populations. This is not to say that animals do not attempt to cross US 101. However, given the lack of core habitat on the west side of the highway, the project will not impede any wildlife dispersal along an established regional dispersal corridor. Since wildlife corridors are not present, they are not further discussed in this section.

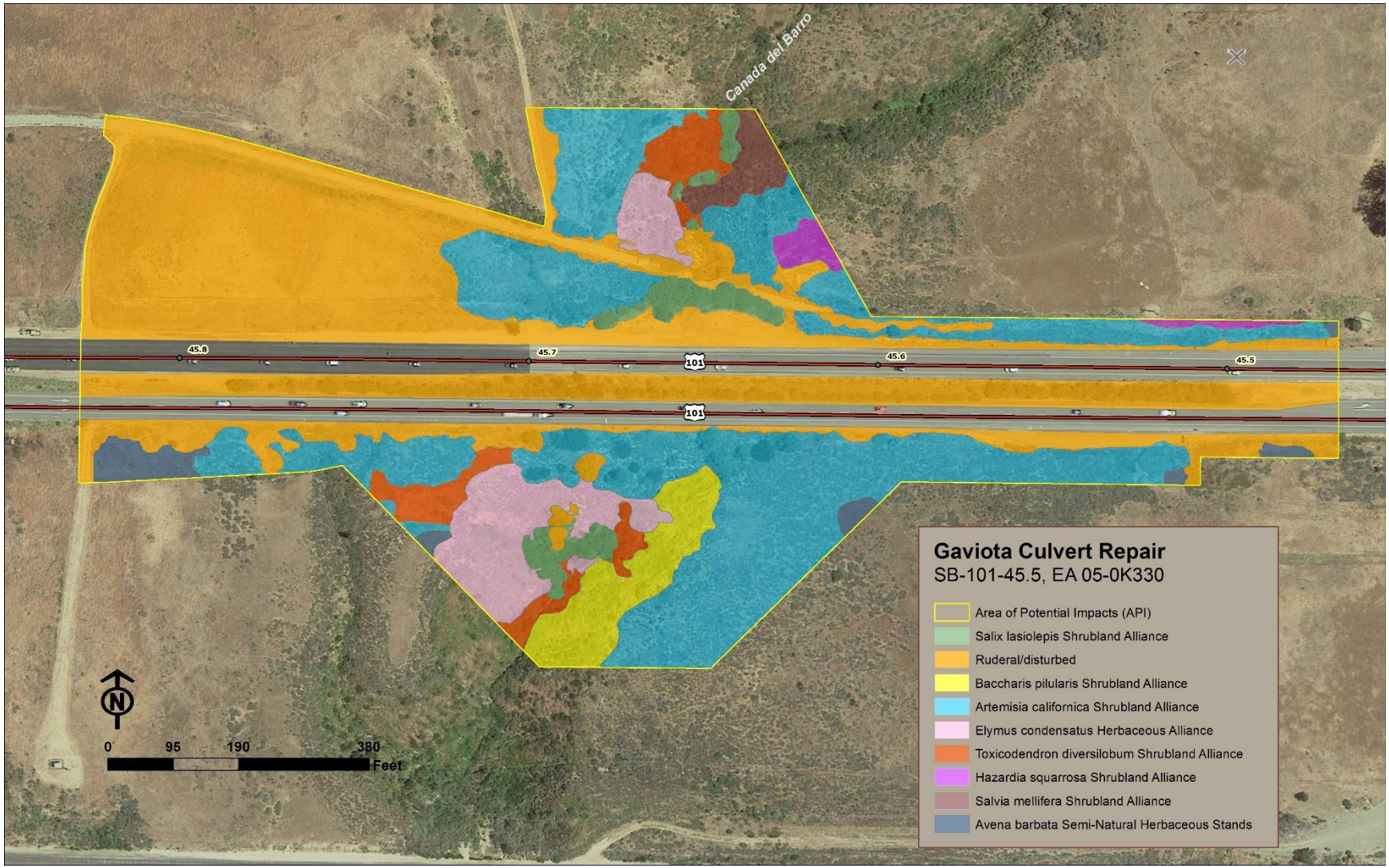
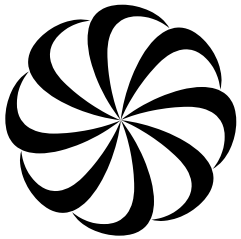


Figure 2-1: Natural Communities



Environmental Consequences

Impacts have been quantified based on estimated ground disturbance, disturbed vegetation, etc. These impact areas are represented as the area of potential impact (API), which was overlain with habitat mapping.

Permanent impacts will consist of headwalls, wingwalls, and rock slope protection (RSP). Temporary impacts will consist of jacking and receiving pits, access roads, and the dewatered work area.

Natural communities affected by the project include up to 20 arroyo willows with diameter at breast height (dbh) over 4 inches and 0.04 acre permanent and 1.28 acres temporary impacts to Coastal scrub habitat. **Table 2-2** summarizes the project's impacts to the identified communities.

Figure 2-2 depicts the area of impact and associated natural communities.

Table 2-2: Natural Communities Impact Areas

Natural Community	Permanent Impacts (Acres)	Temporary Impacts (Acres)
Baccharis pilularis Shrubland Alliance	--	0.19
Artemisia californica Shrubland Alliance	--	0.73
Elymus condensatus Herbaceous Alliance	0.02	0.17
Toxicodendron diversilobum Shrubland Alliance	0.01	0.15
Hazardia squarrosa Shrubland Alliance	--	--
Salvia mellifera Shrubland Alliance	0.006	0.04
(Total Coastal scrub)[1]	**(0.04)**	**(1.28)**
Salix lasiolepis Shrubland Alliance	0.01	0.16
Avena barbata Semi-Natural Herbaceous Stands	0.003	0.05
Ruderal/disturbed	0.20	0.94

[1] In this document, Coastal scrub (Holland 1986), refers to a mosaic of the following plant communities as defined by Sawyer et al. (2009): Baccharis pilularis Shrubland Alliance, Artemisia californica Shrubland Alliance, Elymus condensatus Herbaceous Alliance, Toxicodendron diversilobum Shrubland Alliance, Hazardia squarrosa Shrubland Alliance, Salvia mellifera Shrubland Alliance. Coastal scrub is an ESHA in Santa Barbara County.

Avoidance, Minimization, and Mitigation Measures

Caltrans has studied various access routes to the inlet and outlet of the culvert and has chosen the route with the smallest footprint in order to comply with the County's coastal policies regarding environmentally sensitive habitat.

Ruderal/disturbed areas and ornamental vegetation are not considered sensitive natural communities; therefore, no avoidance, minimization, nor mitigation measures are proposed for these areas. Certain special-status species may have the potential to occur in one or more of the habitats described and these species are discussed in **Section 2.2.3**.

The following measures would avoid or minimize the project's effects on Natural Communities (NC).

NC-1. Environmentally Sensitive Area (ESA) fencing would be installed along the maximum disturbance limits to minimize disturbance to adjacent habitats/vegetation. Special Provisions for the installation of ESA fencing and silt fencing shall 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.

NC-2. Certain invasive/weedy plants occur within the biological study area and measures will be implemented to avoid/minimize the spread of these species throughout the biological study area.

The following avoidance and minimization measures will protect natural communities from invasive species.

NC-3. During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.

NC-4. Only clean fill shall be imported. When practicable, invasive exotic plants in the project site shall be removed and properly disposed. All invasive vegetation removed from the construction site shall be taken to a landfill to prevent the spread of invasive species. If soil from weedy areas must be removed off-site, the top six inches containing the seed layer in areas with weedy species shall be disposed of at a landfill. Inclusion of any species that occurs on the Cal-IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.

NC-5. Construction equipment shall be certified as "weed-free" by Caltrans before entering the construction site. If necessary, wash stations onsite shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area.

The following mitigation measures will offset impacts to Coastal Scrub habitat.

NC-6. Caltrans will replant coastal scrub habitat at a ratio of 1:1 for temporary impacts to Coastal Scrub habitat within the areas disturbed by the project including access roads and jacking and receiving pits.

NC-7. Caltrans will replant coastal scrub habitat at a ratio of 2:1 for permanent impacts. Caltrans has identified an area on the north side of the project surrounded by

the old highway roadbed, US 101 and existing access roads between the two that would be suitable for mitigation planting.

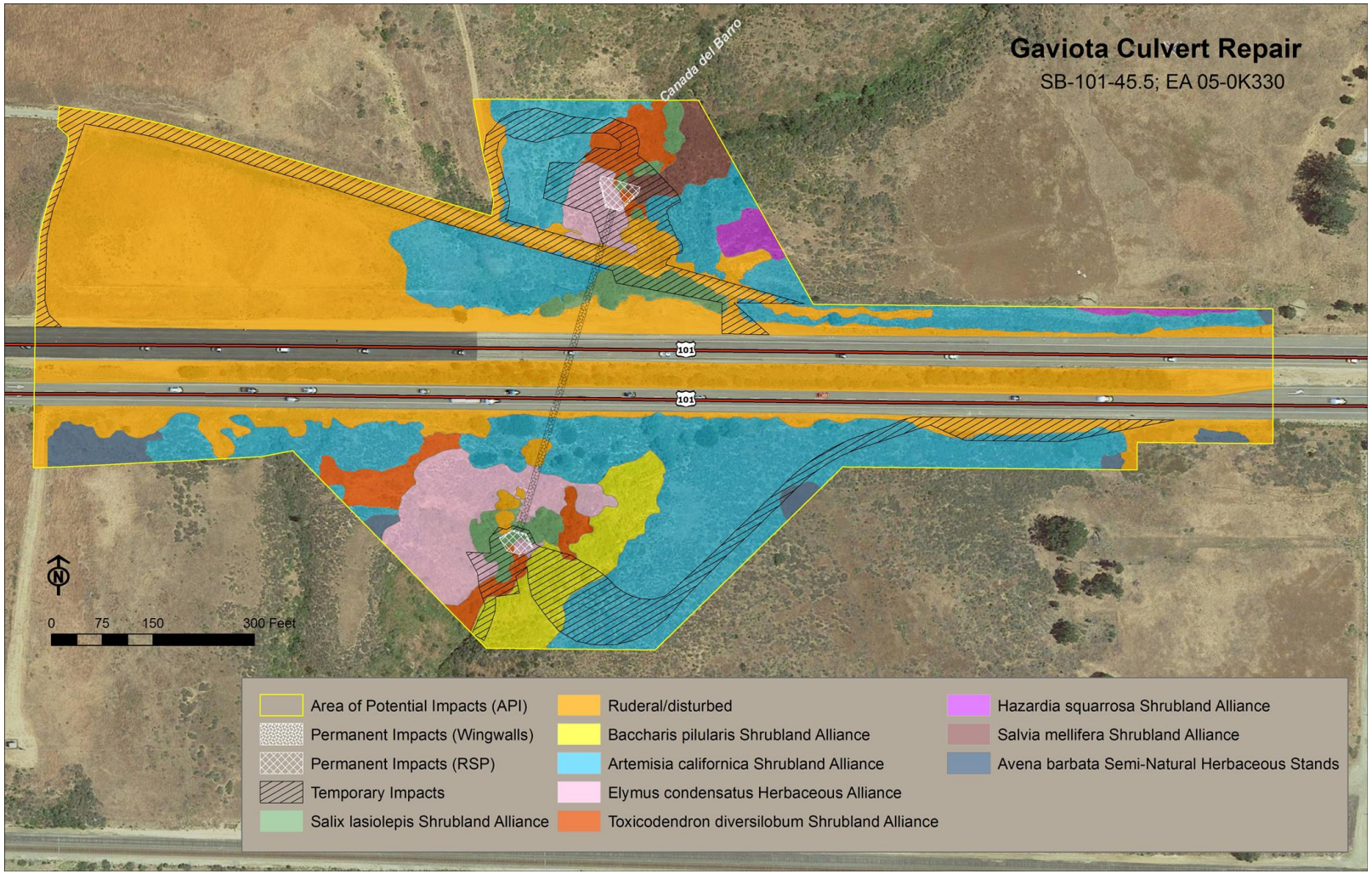
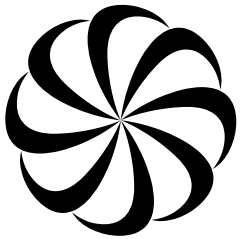


Figure 2-2: Biological Communities Affected



2.2.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of 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 Clean Water Act is to regulate the discharge of dredged or fill material into waters of the US, including wetlands. Waters of the US include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, Clean Water Act jurisdiction extends beyond the ordinary high water mark to the limits of the adjacent wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of water-loving (hydrophytic) 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 a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act 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 US Army Corps of Engineers (USACE) with oversight by the US Environmental Protection Agency (US EPA).

The US Army Corps of Engineers 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 US Army Corps of Engineers Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the US Army Corps of Engineers decision to approve is based on compliance with US Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the US Environmental Protection Agency in conjunction with the US Army Corps of Engineers, and allow the discharge of dredged or fill material into the aquatic system (waters of the US) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the US Army Corps of Engineers 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 US, 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, EO 11990 states that a federal agency, such as Federal Highway Administration 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 proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the 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 California Department of Fish and Wildlife before beginning construction. If California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife 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 US Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

The Regional Water Quality Control Boards 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 Clean Water Act. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Board also issue water quality certifications for activities which may result in a discharge to waters of the US. This is most frequently required in tandem with a Section 404 permit request.

Affected Environment

The following information is summarized from the Natural Environment Study (NES) for the Gaviota Culvert Replacement, May 2018 and updated using the NES Addendum, November 2018.

The culvert in need of replacement was built to convey storm water runoff that flows through Cañada del Barro, under US 101 and toward the Pacific Ocean. Cañada del Barro is an intermittent, ephemeral drainage that conveys runoff from the foothills of the Santa Ynez Mountains, to the Pacific Ocean. Within the project limits, Cañada del Barro remains a dry creek bed throughout most or all of the year. Following the steep

slopes up toward the foothills on the north side of US 101, the vegetation in Cañada del Barro is more suited to dry habitat. At the culvert outlet, on the south side of US 101, the vegetation is slightly moister due to the concentrated moisture from highway runoff.

A small freshwater wetland was mapped completely within the channel and below the ordinary high-water mark (OHWM), at the culvert outlet. The wetland is dominated by tall flatsedge (*Cyperus eragrostis*).

The riparian vegetation in Cañada del Barro consists of a mosaic of scrub, ruderal, and willow thicket communities.

Potential jurisdictional areas and riparian habitat were delineated within the biological study area (BSA). **Table 2-3** summarizes the results of the surveys. **Figure 2-3** depicts the survey results.

Table 2-3: Existing Wetlands and Other Waters

Type of Water Identified	Area Within BSA square feet (acre)
USACE/RWQCB jurisdictional other waters	3,920 (0.09)
USACE/RWQCB jurisdictional wetlands	87 (0.002)
CDFW/CCC jurisdictional areas (riparian)	17,424 (0.40)

Environmental Consequences

Temporary impacts to jurisdictional areas would occur due to temporary access and storage areas, cut/fill, and the jacking/receiving pits required to construct the project. Permanent impacts to jurisdictional areas would occur due to installation of headwalls, wingwalls, and rock slope protection (RSP). **Table 2-4** summarizes the temporary and permanent impacts.

Table 2-4: Temporary and Permanent Impacts to Jurisdictional Areas

Type of Water	Temporary Impact Area square feet (acre)	Permanent Impact Area square feet (acre)
USACE/RWQCB jurisdictional other waters	4,792 (0.11)	444 (0.01)
USACE/RWQCB jurisdictional wetlands	2.7 (0.00007)	3.3 (0.00008)
CDFW/CCC jurisdictional areas (riparian)	6,098 (0.14)	1,307 (0.03)

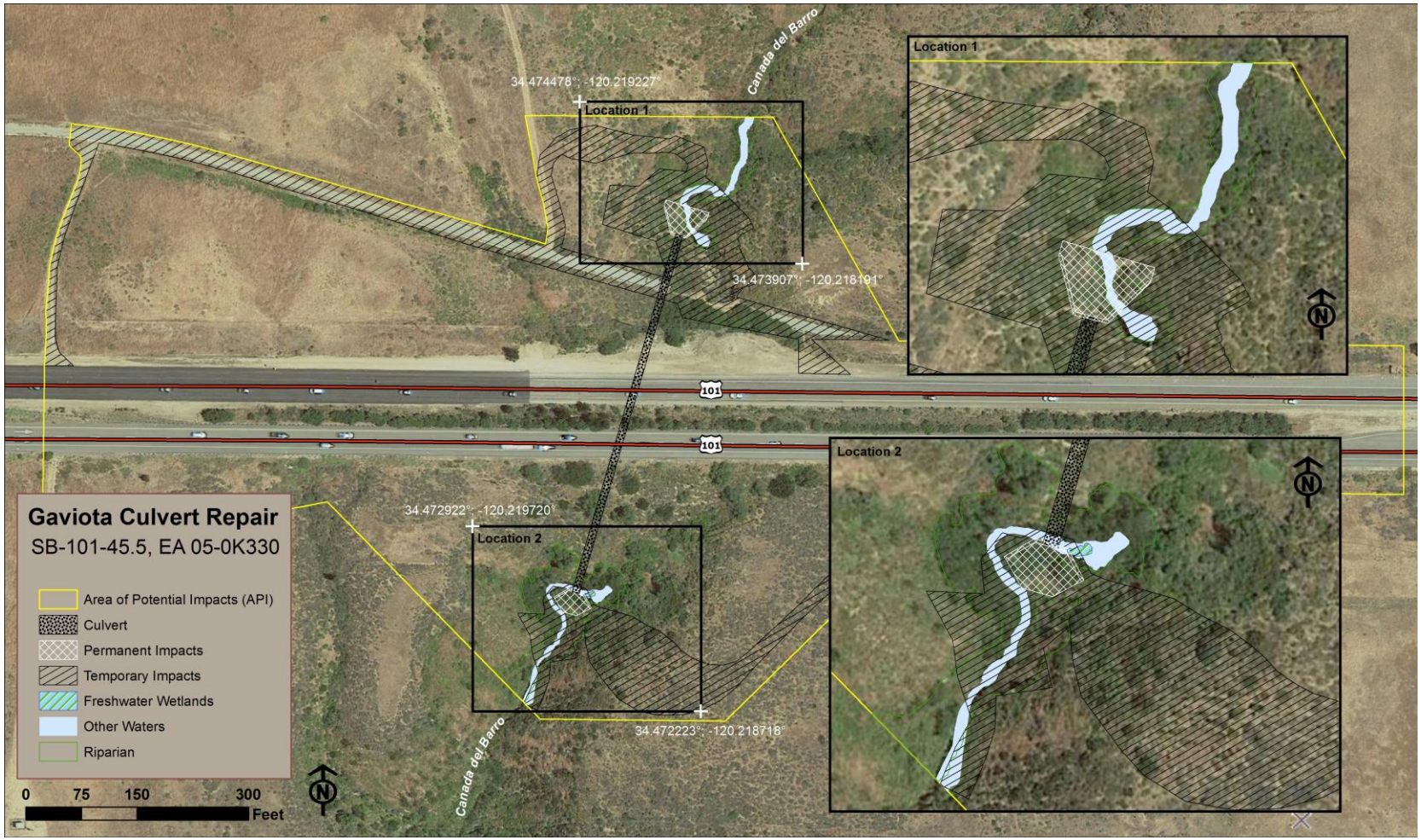
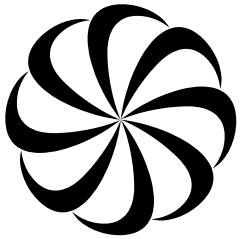


Figure 2-3: Potential Impacts to Jurisdictional Areas



Avoidance, Minimization, and/or Mitigation Measures

The proposed project will impact potential USACE/RWQCB jurisdictional other waters, USACE/RWQCB jurisdictional wetlands, CDFW jurisdictional areas, and California Coastal Commission single parameter wetlands. A variety of avoidance and minimization measures will be implemented to reduce the potential impacts to these jurisdictional areas resulting from the project, including obtaining a Section 404 Nationwide Permit from USACOE, a Section 401 Water Quality Certification from RWQCB, a Section 1602 Streambed Alteration Agreement from California Department of Fish and Wildlife, and a Coastal Development Permit (or Waiver) from the County of Santa Barbara. All permit terms and conditions will be incorporated into the project plans and specifications and implemented.

The impacts to jurisdictional areas would be of limited scale, consisting of the temporary removal of vegetation, jacking and boring operations, and installation of RSP, headwalls and wingwalls. Compensatory mitigation is proposed at a 1:1 ratio (acreage) for temporary impacts and at a 3:1 ratio (acreage) for permanent impacts to riparian vegetation via restoration (re-establishment). **Table 2-5** summarizes the areas required to compensate for impacts to jurisdictional areas.

Table 2-5: Compensatory Mitigation for Jurisdictional Areas

Type of Water	Impact Area		Temporary (1:1) square feet (acre)	Permanent (3:1) square feet (acre)	Total square feet (acre)
	Temporary square feet (acre)	Permanent square feet (acre)			
USACE/RWQCB jurisdictional other waters	4,792 (0.11)	444 (0.01)	4,792 (0.11)	1,332 (0.02)	6,124 (0.14)
USACE/RWQCB jurisdictional wetlands	2.7 (0.00007)	3.3 (0.00008)	2.7 (0.00007)	9.9 (0.0002)	12.6 (0.0002)
CDFW/CCC jurisdictional areas (riparian)	6,098 (0.14)	1,307 (0.03)	6,098 (0.14)	3,921 (0.09)	10,019 (0.23)

With the implementation of the following avoidance, minimization, and mitigation measures, the resulting project impacts to jurisdictional areas would be less than significant.

The following measures would avoid the effects of the project on Wetlands and Other Waters (W).

W-1. Prior to any ground-disturbing activities, environmentally sensitive area fencing shall be installed around jurisdictional areas, coastal zone environmentally sensitive habitat areas, and the dripline of trees to be protected within the project limits. Caltrans-defined environmentally sensitive area shall be noted on design plans and delineated in the field prior to the start of construction activities.

W-2. Any necessary temporary stream diversion shall be timed to occur between June 1 and October 31 in any given year, or as otherwise directed by the regulatory agencies, when the surface water is likely to be dry or at seasonal minimum. Deviations from this work window will only be made with permission from the relevant regulatory agencies.

W-3. During construction, the staging areas shall conform to Best Management Practices (BMPs) applicable to attaining zero discharge of storm water runoff. At a minimum, all 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.

The following measures would minimize impacts to Wetlands and Other Waters (W).

W-4. During construction, 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.

W-5. During construction, erosion control measures shall be implemented. Silt fencing, fiber rolls, and barriers shall be installed as needed between the project site and jurisdictional other waters and riparian habitat. At a minimum, erosion controls shall be maintained by the contractor on a daily basis throughout the construction period.

W-6. Stream contours shall be restored as close as possible to their original condition.

The following measures are required in order to reduce potential impacts to Wetlands and Other Waters (W) to less than significant.

W-7. Replace jurisdictional areas temporarily impacted by the project at a 1:1 ratio.

W-8. Replace jurisdictional areas permanently impacted by the project at a 3:1 ratio.

2.2.3 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) (and the Department, as assigned), are required to consult with the US 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 or a Letter of Concurrence. Section 3 of federal endangered species act 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. California endangered species act 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 California endangered species act. Section 2080 of the California 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 California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." California endangered species act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by California department of fish and wildlife. For species listed under both federal endangered species act and California endangered species act requiring a Biological Opinion under Section 7 of federal endangered species act, the California department of fish and wildlife may also authorize impacts to California endangered species act 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

The information in this section is summarized from the Natural Environment Study (NES) for the Gaviota Culvert Replacement May 2018 and updated using the NES Addendum November 2018.

Based on the special status plant species list provided by USFWS, the project impact area was surveyed for the following threatened and endangered species: Santa Ynez groundstar (*Ancistrocarphus kellii*), marsh sandwort (*Arenaria paludicola*), Santa Margarita manzanita (*Arctostaphylos pilosula*), Refugio manzanita (*Arctostaphylos refuaioensis*), salt marsh bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*), Lompoc yerba santa (*Eriodictyon capitatum*), Ojai fritillary (*Fritillaria ojaiensis*), Mesa horkelia (*Horkelia cuneata var. ouberula*), Coulter's godfields (*Lasthenia glabrata* ssp. *coulteri*), Gambel's watercress (*Rorippa gambellii*) and Valley Needlegrass Grassland habitat. During appropriately-timed floristic surveys, no suitable habitat and/or no observations were made of these species and no further studies are recommended.

Based on the special status animal species list provided by the USFWS, the project impact area was surveyed for the following threatened and endangered species: vernal pool fairy shrimp (*Branchinecta lynchi*), overwintering population of monarch butterfly (*Danaus plexippus*), tidewater goby (*Eucyclogobius newberryi*), two-striped garter snake (*Thamnophis hammondii*), Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), marbled murrelet (*Brachyramphus marmoratus*), ferruginous hawk (*Buteo regalis*), western snowy plover (*Charadrius alexandrines nivosus*), olive-sided flycatcher (*Contopus cooperi*), Southwestern willow flycatcher (*Empidonax traillii extimus*), prairie falcon (*Falco mexicanus*), peregrine falcon (*Falco peregrinus*), yellow-breasted chat (*Icteria virens*), purple martin (*Progne subis*), California least tern (*Sternula antillarum browni*), least Bell's Vireo (*Vireo bellii pusillus*), southern sea otter (*Enhydra lutris*). No suitable habitat is present and no further studies are recommended.

There is no Essential Fish Habitat (EFH) for federally managed fish species at the proposed project location and EFH consultation with National Marine Fisheries will not be required.

Suitable habitat for La Purisima manzanita (*Arctostaphylos purissima*), Miles' milk vetch *(Astragalus didymocarpus var. milesianus*), Dabidson's saltscale (*atriplex serenana var. davidsonii*), Seaside bird's beak (*Cordylanthus maritimum* ssp. *maritimum*), Kellogg's horkelia (*Horkelia cuneata var. sericea*), Santa Barbara honeysuckle (*Lonecera subspicata var. subspicata*), and black-flowered figwort (*Scrophularia atrata*) were present within the project impact area, however they were

not observed during appropriately timed floristic surveys and the project would have no effect on the species.

Suitable upland habitat was identified within the project footprint for: foothill yellow-legged frog (*Rana boylii*), California red-legged frogs (*Rana draytonii*), Coast Range newt (*Raricha torosa*), and western pond turtle (*Emys marorata*). However, aquatic habitat was not identified within the project footprint.

Potential habitat for coast horned lizard (*Phrynosoma coronatum* [*blainvillii population*]) was identified within the project footprint, however none were observed during surveys and they are not expected to occur within the study area.

Suitable nesting habitat for Southern California rufus-crowned sparrow (*Aimophila ruliceps canascens*) was identified, however the species was not observed during surveys.

Marginal nesting habitat was observed for the yellow warbler (*Setophaga petechia*); however, the species was not observed and it is not expected to occur within the study area.

Suitable habitat was identified for the San Diego desert woodrat (*Neotoma lepida intermedia*) and the American badger (*Taxidea taxus*), however neither the species nor signs of the species were observed during surveys.

Suitable roosting habitat for the pallid bat (*Antrozous paflidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*) was not found within the project footprint and the species were not observed during surveys.

Gaviota Tarplant

Gaviota tarplant (*Deinandra increscens* ssp. *vilosa*), a member of the *Asteraceae* (sunflower family), is a yellow-flowered, variable gray-green, soft, hairy annual that is usually 12 to 35 inches tall. The blooming period for Gaviota tarplant is between May and October. Gaviota tarplant occurs in perennial and annual grasslands, coastal scrub, and coastal bluff scrub. It has a localized distribution in western Santa Barbara County, largely restricted to one extended population along a two-mile stretch of coastal terrace near Gaviota. It is known to occur on the coastal terrace and foothill portion of Gaviota State Park and on private lands inland of US 101 on the Gaviota Coast. Gaviota tarplant was listed as endangered by the State of California in 1990 and listed as federally endangered in 2000. Critical Habitat was designated in 2001. Threats to Gaviota tarplant include destruction of individual plants, habitat loss, and habitat degradation from the development and decommissioning of oil and gas facilities, including pipelines, and competition with non-native weeds.

Botanical surveys were conducted within the biological study area during 2017 throughout the entire blooming period for Gaviota tarplant. Surveys were timed to capture the entire blooming period for Gaviota tarplant. While Gaviota tarplant was found blooming at the reference site in 2017, it was not observed within the

biological study area on any of these surveys, and Gaviota tarplant is not expected to occur within the biological study area, however critical habitat for Gaviota tarplant is located within the project footprint.

Gaviota Tarplant Critical Habitat

Federally designated Critical Habitat for Gaviota tarplant (*Deinandra increscens* ssp. *villosa*) occurs in the biological study area. Federal fish and wildlife agencies consider the physical and biological features essential to the conservation of the species that may require special management considerations or protection to be the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species. The PCEs that were identified at the proposed culvert replacement location are described below. The biological study area was determined to support:

1. Gaviota tarplant primary constituent element 1 (soils with a large component of sand that tend to be acidic in the biological study area);

2. Gaviota tarplant primary constituent element 2 (plant communities that support associated species in the biological study area).

A Biological Assessment was submitted to USFWS for Gaviota tarplant and Gaviota tarplant Critical Habitat. The Biological Opinion was issued by USFWS on February 15, 2019.

California Red-Legged Frog

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

The frogs use a variety of areas, including aquatic, riparian, and upland habitats. The frogs typically breed from January to July. They use both riparian and upland habitats for foraging, shelter, cover, and nondispersal movement.

Protocol surveys were not conducted; however, the species is known to occur in nearby Gaviota Creek, therefore presence of the species in the upland habitat of the biological study area is inferred.

California red-legged frog Critical Habitat near Gaviota Creek area begins approximately 0.2 mile west of the biological study area; therefore, no CRLF Critical Habitat will be impacted by the project.

The proposed project is anticipated to qualify for programmatic concurrence for California red-legged frog for the purposes of USFWS formal consultation (USFWS 2011).

Environmental Consequences

Because of a lack of suitable habitat and/or no observations during appropriately-timed floristic surveys, FESA Section 7 effects determination is that the proposed project will have no effect on the following federally listed plant species: marsh sandwort (*Arenaria paludicola*), salt marsh bird's-beak (*Chloropyron maritimus* ssp. *maritimus*), Gambel's watercress (*Rorippa gambellii*), and Gaviota tarplant (*Deinandra increscens* ssp. *vilosa*). No Critical Habitat has been designated for any of these federally listed plants.

Because of a lack of suitable habitat, FESA Section 7 effects determination is that the proposed project will have no effect on the following federally listed animal species: vernal pool fairy shrimp (*Branchinecta lynchi*), tidewater goby (*Eucyclogobius newberryi*), marbled murrelet (*Brachyramphus marmoratus*), western snowy plover (*Charadrius alexandrines nivosus*), least Bell's Vireo (*Vireo bellii pusillus*), Southwestern willow flycatcher (*Empidonax traillii extimus*), California least tern (*Stemula antillarum browni*), or southern sea otter (*Enhydra lutris*). There will be no impacts to federally designated Critical Habitat for any of these federally listed animal species.

Gaviota Tarplant

The proposed project is not anticipated to directly impact Gaviota tarplant. Although the biological study area supports limited suitable habitat for the species, none were observed during appropriately-timed floristic surveys within the biological study area. Due to the extremely restricted range of the species, FESA Section 7 preliminary effects determination is the project may affect but is not likely to adversely affect Gaviota tarplant.

Gaviota Tarplant Critical Habitat

Based on the disturbance footprint of the area of potential impact, estimated permanent and temporary impacts to federally designated Gaviota tarplant Critical Habitat have been quantified below.

For Gaviota tarplant Critical Habitat, approximately 0.60 acre would be permanently impacted and 2.52 acres temporarily impacted. Of the 7848.78 acres (3176.28 ha) within Gaviota tarplant Critical Habitat Unit *Conception-Gaviota*, the 3.12 acres of total impacts associated with the proposed project equate to approximately 0.04 percent of this Critical Habitat Unit. Considered in this context, FESA Section 7 preliminary effects determination is that the proposed project may affect, and is likely to adversely affect, Gaviota tarplant Critical Habitat.

California Red-Legged Frogs

Project construction could result in injury or mortality of California red-legged frogs in the upland habitat, if they were present. The potential need to capture and relocate the frogs would subject them to stresses that could result in adverse effects. Injury or mortality could occur via accidental crushing by foot-traffic or construction equipment. Erosion and sedimentation could also occur, which would directly or indirectly affect water quality. The potential for these impacts are likely to be low due to their absence within the biological study area, but the species could potentially expand population and location.

FESA Section 7 preliminary effects determination is that the proposed project may affect, but is not likely to adversely affect, California red-legged frog. The basis for this determination is that California red-legged frog presence has been inferred in the upland habitat within the area of potential impact and there would be potential for take of the species during construction.

The proposed project would impact 1.14 ac of ruderal/disturbed habitat, and 1.22 ac of coastal scrub habitat via grading and vegetation removal to accommodate the culvert construction. If determined to be present, American badgers could be entombed during grading or injured by construction equipment, resulting in the adverse effects of injury or mortality. Noise and disturbance associated with construction could adversely affect foraging and dispersal behaviors; however, this would be unlikely as construction activities would likely occur during daylight hours when American badgers are typically inactive and residing in dens.

Avoidance, Minimization, and/or Mitigation Measures

Numerous measures in this section that apply to jurisdictional areas, Gaviota tarplant, California red-legged frog, foothill yellow-legged frog, Coast Range newt, western pond turtle, pallid bat, Townsend's big-eared bat, San Diego desert woodrat, American badger, nesting birds, and invasive species are also applicable to federally designated Critical Habitat.

The following minimization measures are recommended for project activities occurring within Gaviota tarplant Critical Habitat, regardless of pre-construction survey findings for existence of Gaviota tarplant specimens. These measures would minimize potential impacts to Threatened and Endangered Species (TES).

TES-1. A qualified botanist approved by both US Fish and Wildlife Service and California Department of Fish and Wildlife to work with Gaviota tarplant shall oversee flagging of the perimeter of all approved work areas in Gaviota tarplant Critical Habitat prior to ground disturbance.

TES-2. Prior to construction, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of

Gaviota tarplant and its habitat, the location of Critical Habitat within the area of potential impact, the specific measures that are being implemented to conserve Gaviota tarplant for the current project, and the boundaries of proposed areas of disturbance.

TES-3. Vehicles and equipment shall be free of dirt, mud, or vegetation that may contain non-native weed species that could became established as a result of work conducted within the biological study area. Non-native weed species shall be removed when and where it is possible to do so.

TES-4. Preconstruction surveys will be conducted within the project footprint, during the Gaviota tarplant blooming period, every year prior to construction. Should pre-construction surveys determine that Gaviota tarplant is growing within proposed work locations, Section 7 consultation will be reinitiated with the USFWS.

Caltrans anticipates the proposed project will qualify for Federal Endangered Species Act incidental take coverage under the *Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program* (USFWS 2011). The following measures are the applicable measures from the Programmatic Biological Opinion for CRLF that will be implemented for this project and would minimize potential impacts to Threatened and Endangered Species (TES), including foothill yellow-legged frog, Coast Range newt, and western pond turtle.

TES-5. Only US Fish and Wildlife Service -approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

TES-6. Ground disturbance shall not begin until written approval is received from the US Fish and Wildlife Service that the biologist is qualified to conduct the work.

TES-7. A US Fish and Wildlife Service -approved biologist shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is found and these individuals are likely to be killed or injured by work activities, the approved biologist shall be allowed sufficient time to move them from the site before work begins. The US Fish and Wildlife Service -approved biologist shall relocate the California red-legged frogs the shortest distance possible to a location that contains suitable habitat and will not be affected by the activities associated with the project. The relocation site shall be in the same drainage to the extent practicable. Caltrans shall coordinate with US Fish and Wildlife Service on the relocation site prior to the capture of any California red-legged frogs.

TES-8. Before any activities begin on a project, a US Fish and Wildlife Service -approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which

the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

TES-9. A US Fish and Wildlife Service -approved biologist shall be present at the work site until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans shall designate a person to monitor on-site compliance with all minimization measures. The US Fish and Wildlife Service -approved biologist shall ensure that this monitor receives the training outlined in measure 4 above and in the identification of California red-legged frogs. If the monitor or the US Fish and Wildlife Service -approved biologist recommends that work be stopped because California red-legged frogs would be affected in a manner not anticipated by Caltrans and US Fish and Wildlife Service during review of the proposed action, they shall notify the resident engineer immediately. The resident engineer shall resolve the situation by requiring that all actions that are causing these effects be halted. When work is stopped, the US Fish and Wildlife Service shall be notified as soon as possible.

TES-10. 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.

TES-11. Without the express permission of US Fish and Wildlife Service, all refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet from the riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of habitat does not occur during such 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.

TES-12. Habitat contours shall be returned to a natural configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with the project, unless US Fish and Wildlife Service and Caltrans determine that it is not feasible or modification of original contours would benefit the California red-legged frog.

TES-13. 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. Environmentally sensitive areas shall be established to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

TES-14. Caltrans shall attempt to schedule work for times of the year when impacts to the California red-legged frog would be minimal. For example, work that would

affect large pools that may support breeding would be avoided, to the maximum degree practicable, during the breeding season (November through May). Isolated pools that are important to maintain California red-legged frogs would be minimal. For example, work that would affect large pools that may support through the driest portions of the year would be avoided, to the maximum degree practicable, during the late summer and early fall. Habitat assessments, surveys, and technical assistance between Caltrans and the US Fish and Wildlife Service during project planning shall be used to assist in scheduling work activities to avoid sensitive habitats during key times of year.

TES-15. To control sedimentation during and after project completion, Caltrans shall implement Best Management Practices as outlined in any authorizations or permits, issued under the authorities of the Clean Water Act received for the project. If Best Management Practices are ineffective, Caltrans shall attempt to remedy the situation immediately, in coordination with US Fish and Wildlife Service.

TES-16. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any diversions or barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the streambed shall be minimized to the maximum extent possible; any imported material shall be removed from the streambed upon completion of the project.

TES-17. Unless approved by US Fish and Wildlife Service, water shall not be impounded in a manner that may attract California red-legged frogs.

TES-18. A US Fish and Wildlife Service -approved biologist shall permanently remove any individuals of exotic species, such as bullfrogs (*Rana catesbeiana*), signal and red swamp crayfish (*Pacifasticus leniusculus*; *Procambarus clarkia*), and centrarchid fishes from the project area, to the maximum extent possible. The US Fish and Wildlife Service -approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.

TES-19. To ensure that diseases are not conveyed between work sites by the US Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force shall be followed at all times.

TRD-20. Project sites shall be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by activities associated with the project, unless US Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

TES-21. Caltrans shall not use herbicides as the primary method to control invasive, exotic plants. However, if it is determined that the use of herbicides is the only feasible method for controlling invasive plants at a specific project site; it will implement the following additional protective measures for the California red-legged frog:

a) Caltrans shall not use herbicides during the breeding season for the California red-legged frog;

b) Caltrans shall conduct surveys for the California red-legged frog immediately prior to the start of herbicide use. If found, California red-legged frogs shall be relocated to suitable habitat far enough from the project area that no direct contact with herbicide would occur;

c) Giant reed and other invasive plants shall be cut and hauled out by hand and painted with glyphosate-based products, such as Aquamaster® or Rodeo®;

d) Licensed and experienced Caltrans staff or a licensed and experienced contractor shall use a hand-held sprayer for foliar application of Aquamaster® or Rodeo® where large monoculture stands occur at an individual project site;

e) All precautions shall be taken to ensure that no herbicide is applied to native vegetation;

f) Herbicides shall not be applied on or near open water surfaces (no closer than 60 feet from open water);

g) Foliar applications of herbicide shall not occur when wind speeds are in excess of 3 miles per hour;

h) No herbicides shall be applied within 24 hours of forecasted rain;

i) Application of all herbicides shall be done by qualified Caltrans staff or contractors to ensure that overspray is minimized, that all applications are made in accordance with the label recommendations, and with implementation of all required and reasonable safety measures. A safe dye shall be added to the mixture to visually denote treated sites. Application of herbicides shall be consistent with the US Environmental Protection Agency's Office of Pesticide Programs, Endangered Species Protection Program county bulletins;

j) All herbicides, fuels, lubricants, and equipment shall be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Prior to the onset of work, Caltrans shall ensure that a plan is in place for a prompt and effective response to accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Caltrans shall include recommended modifications in coordination with US Fish and Wildlife Service of the protective measures listed above if alternative measures would facilitate compliance with the provisions of consultation.

Caltrans proposes to implement the following avoidance and minimization measures for American badger, as adapted from the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011b):

TES-22. No less than 14 days and no more than 30 days prior to any construction activities or any project activity likely to impact the American badger, a preconstruction survey shall be conducted for American badger. The survey shall identify American badger habitat features on the project site, evaluate use by American badger and, if possible, assess the potential impacts to the American badger by the proposed activity. The status of all dens should be determined and mapped. Known dens, if found occurring within the footprint of the activity, shall be monitored for three days with tracking medium to determine the current use. If no American badger activity is observed during this period, the den shall be destroyed immediately to preclude subsequent use. If American badger activity is observed at the den during this period, the den shall be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the den is determined to be unoccupied shall the den be excavated under the direction of the biologist.

TES-23. Written results of the preconstruction/preactivity survey will be submitted to CDFW within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If the preconstruction/preactivity survey reveals an active den or new information regarding American badger presence within 200 feet of the project boundary, the CDFW shall be immediately notified.

TES-24. Prior to ground breaking, a qualified biologist shall conduct an environmental education and training session for all construction personnel.

TES-25. Project employees shall be directed to exercise caution when driving within the project area. A 20-mph speed limit shall be strongly encouraged within the project site. Cross-country travel by vehicles shall be prohibited outside of the proposed areas of disturbance, unless authorized by CDFW. Project employees shall be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. Construction activity shall be confined within the project site, which may include temporary access roads and staging areas specifically designated and marked for these purposes.

TES-26. A litter control program shall be instituted within the BSA. No canine or feline pets or firearms (except for law enforcement officers and security personnel) shall be permitted on construction sites in order to avoid harassment, killing, or injuring of American badger.

TES-27. Maintenance and construction excavations greater than 2-ft deep shall be covered (e.g., with plywood, sturdy plastic, steel plates, or equivalent), filled in at the end of each working day, or have earthen escape ramps no greater than 200 ft apart to prevent trapping American badger.

TES-28. The resident engineer or their designee shall be responsible for implementing these conservation measures and shall be the point of contact.

TES-29. All grindings and asphaltic-concrete waste shall be stored within previously disturbed areas absent of habitat and at a minimum of 150 ft from any culvert, wash, or stream crossing.

TES-30. Restoration and revegetation work associated with temporary impacts shall be done using California endemic plants appropriate for the location. To the maximum extent practicable, topsoil shall be removed, cached, and returned to the site according to successful restoration protocols. Loss of soil from run-off or erosion shall be prevented with straw bales, straw wattles, or similar means provided they do not entangle or block escape or dispersal routes of American badger.

TES-31. The project construction area shall be delineated with high visibility temporary fencing, flagging, or other barrier to prevent encroachment of construction personnel and equipment onto any sensitive areas during project work activities. Such fencing shall be inspected and maintained daily until completion of the project and will be removed only when all construction equipment is removed from the site. No project activities shall occur outside the delineated project area.

The following avoidance and minimization measures will provide protection for San Diego woodrats.

TES-32. Prior to implementation of proposed project activities, a pre-construction visual survey will be conducted within suitable woodrat habitat (coastal scrub) in the BSA to determine the presence or absence of woodrat nests.

TES-33. If woodrat nests are located during this survey, avoid the nest(s) and establish an ESA with a 25-ft buffer around each nest.

TES-34. To the extent feasible, project activities requiring grading, mechanized equipment or vehicles, or large crews within the 25-foot protective buffer should only occur during the non-breeding season (October-November) to avoid noise impacts to any breeding woodrats that may occupy the nest from December through September.

TES-35. If project activities cannot avoid impacting or removing the nest, then the nest(s) should be dismantled by hand prior to grading or vegetation removal activities. The nest dismantling shall occur during the non-breeding season (October-November) and shall be conducted so that the nest material is removed starting on the side where most impacts will occur and ending on the side where the most habitat will be undisturbed, which will allow for any woodrats in the nest to escape into adjacent undisturbed habitat.

TES-36. If young are encountered during nest dismantling, the dismantling activity should be stopped and the material replaced back on the nest and the nest should be left alone and rechecked in 2-3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

The following avoidance and minimization measures will protect the Coast Range Newt, Western Pond Turtle, and Two-striped Garter Snake.

TES-37. Prior to initiation construction, Caltrans shall conduct an informal worker environmental training program including a description of Coast Range newt, western pond turtle and two-striped garter snake along with their legal/protected status, proximity to the project site, and avoidance/minimization measures to be implemented during the project.

TES-38. Prior to construction, a biologist determined qualified by Caltrans shall survey the API and, if present, capture and relocate any Coast Range newts, western pond turtles, or two-striped garter snakes to suitable habitat downstream of the API. Observations of SSCs or other special-status species shall be documented on CNDDB forms and submitted to CDFW upon project completion. If these species or other SSC aquatic species are observed during construction, they will likewise be relocated to suitable downstream habitat by a qualified biologist.

TES-39. During in-channel work, if pumps are incorporated to assist in temporarily dewatering the site, intakes shall be completely screened with no larger than 3/32-inch (2.38 mm) wire mesh to prevent sensitive aquatic species from entering the pump system. Pumps shall release the additional water to a settling basin allowing the suspended sediment to settle out prior to re-entering the stream(s) outside of the isolated area. The form and function of all pumps used during the dewatering activities shall be checked daily, at a minimum, to ensure a dry work environment and minimize adverse effects to aquatic species.

The following measures apply to all birds protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, including Least Bell's Vireo, Southwestern Willow Flycatcher, Yellow Warbler, and other nesting birds.

TES-40. Prior to construction, vegetation removal shall be scheduled to occur from September 2 to February 14, outside of the typical nesting bird season if possible, to avoid potential impacts to nesting birds. If tree removal or other construction activities are proposed to occur within 100 ft of potential habitat during the nesting season (February 15 to September 1), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than three (3) days prior to construction. If an active nest is found, Caltrans shall coordinate with CDFW to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have fledged.

TES-41. During construction, active bird nests shall not be disturbed and eggs or young of birds covered by the MBTA and California Fish and Game Code shall not be killed, destroyed, injured, or harassed at any time. Readily visible exclusion zones where nests must be avoided within 100 ft of disturbance shall be established by a qualified biologist using ESA fencing. Work in exclusion zones shall be avoided until young birds have fledged (permanently left the nest) or the qualified biologist has determined that nesting activity has otherwise ceased.

TES-42. Trees to be removed shall be noted on design plans. Prior to any ground-disturbing activities, ESA fencing shall be installed around the dripline of trees to be protected within project limits.

TES-43. All clearing/grubbing and vegetation removal shall be monitored and documented by the biological monitor(s) regardless of time of year.

The following avoidance and minimization measures will provide protection to the Pallid Bat and the Townsend's Big-Eared Bat.

TES-44. A roosting bat survey shall be conducted for the existing bridge by a biologist determined qualified by Caltrans no more than 14 days prior to construction. If an active roost is found, a qualified biologist shall determine an appropriate buffer and monitoring strategy based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that all bats have left the roost.

TES-45. If tree removal is required during the bat maternity roosting season (February 15 to September 1), a bat roost survey shall be conducted by a qualified biologist within three (3) days prior to removal. If an active bat 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 a qualified biologist has determined that roosting activity has ceased. Active bat maternity roosts shall not be disturbed or destroyed at any time.

The compensatory mitigation described in Wetlands and Other Waters of the US (**W-8** and **9**) will also mitigate for the impacts to California red-legged frog. As such, with the implementation of the described mitigation, no additional compensatory mitigation is required and none is proposed.

2.3 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from

individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

Affected Environment

Caltrans has identified four resources that may be undergoing a change due to cumulative impacts of development or are in poor health within the project area. The resources, their associated study areas, and a brief description of the historic and current health of the resources are described below.

Jurisdictional Areas: Jurisdictional areas include areas where wet soils, water, and water-loving vegetation are present. Riparian habitat is included in jurisdictional areas and is typically characterized by its proximity to jurisdictional waters and wetlands and includes vegetative habitat of varying types.

This resource was identified for inclusion in the cumulative impact analysis due to its sensitive nature and poor health. The resource study area identified for this resource is the Gaviota Coast and associated watersheds.

Historically, jurisdictional areas have been in decline. Approximately 90 percent of the resources have been lost to other land uses. It is likely that additional jurisdictional areas and riparian habitat was present throughout the various watersheds within the Gaviota Coast prior to the arrival of agriculture in this area, which dates back to the beginning of western settlement in California. The Gaviota Coast experienced steady population and economic growth during the early 20th century, at which time ranching and other agricultural activities were the main economic drivers and oil development began to proliferate. Due to the overall decline in large scale development within this area and the federal and State regulatory oversight of jurisdictional areas since the 1970's, jurisdictional areas and riparian habitat have become relatively stable in this area.

Gaviota Tarplant and Gaviota Tarplant Critical Habitat: Gaviota tarplant (*Deinandra increscens* ssp. *villosa*) is an annual plant that occurs in grasslands, coastal scrub, and coastal bluff scrub. See **Figure 2-4.**

These resources were identified for inclusion in the cumulative impact analysis due to their sensitive nature, limited dispersion, and protected status. The resource study area identified for these resources include the majority of the Conception-Gaviota Critical Habitat Unit along the Gaviota Coast. See **Figure 2-4.**

Gaviota tarplant was federally listed as endangered on March 20, 2000. USFWS designated Critical Habitat for Gaviota tarplant on November 7, 2002. It is also listed by the State of California as endangered. It was listed due to the fact that suitable habitat for Gaviota tarplant is highly localized and rare. Currently, it is recognized as having a highly localized distribution in western Santa Barbara County, California with seven main populations: Lion's Head (near Point Sal), Point Arguello, Tranquillion Mountain/Sudden Peak, Point Conception, Hollister Ranch, Santa Ynez Mountains, and Gaviota.

Gaviota tarplant and the Critical Habitat currently remain stable, but face threats from the destruction of individual plants, habitat loss, and degradation from the development and decommissioning of oil and gas facilities and pipelines, incompatible fire management practices, residential and commercial development, and competition with nonnative weeds. Within the last few years, several aggressive nonnative plants have invaded the Gaviota Coast and pose a serious threat to Gaviota tarplant and the remaining coastal prairie habitat.

California Red-legged Frog: The California red-legged frog is federally threatened and considered a Species of Special Concern by California Department of Fish and Wildlife. California red-legged frogs use a variety of areas, including aquatic, riparian, and upland habitats. The California red-legged frog uses both riparian and upland habitats for foraging, shelter, cover, and travel.

This resource was included in the cumulative impact analysis due to its protected status. The resource study area identified for this resource is identical to that identified for jurisdictional areas, namely the Gaviota Coast and its associated watersheds. See **Figure 2-4**.

The California red-legged frog was federally listed as threatened on May 23, 1996. USFWS has published a recovery plan that identified Critical Habitat units. This project is outside of those Critical Habitat units, thus has no impact on California red-legged frog Critical Habitat. It is also listed as a species of special concern by California Department of Fish and Wildlife. Habitat loss and alteration, combined with over-exploitation and introduction of exotic predators, were important factors in the decline of the California red-legged frog in the early to mid-1900s leading to elimination or near-elimination from 70 percent of its former range.

Currently, the California red-legged frog population within the Gaviota Coast is stable, in part due to restoration efforts within the resource study area. However, continuing threats to the California red-legged frog include direct habitat loss due to stream alteration and loss of aquatic habitat, indirect effects of expanding urbanization, and competition or predation from non-native species.

Coastal Scrub habitat refers to a mosaic of plant communities and includes *Baccharis pilularis* Shrubland Alliance*, Artemisia californica* Shrubland Alliance, *Elymus condensatus* Herbaceous Alliance, *Toxicodendron diversilobum* Shrubland Alliance*, Hazardia squarrosa* Shrubland Alliance, *Salvia mellifera* Shrubland Alliance. Because such habitat is protected under the Santa Barbara County Coastal Land Use Plan, it has been included in this cumulative impact analysis.

Environmental Consequences

Eight projects, including the project considered in this environmental document, have been identified within the resource study areas that could contribute to cumulative impacts on the four identified resources under consideration in this analysis.

Four of the projects propose residential development, two of the projects are related to oil infrastructure, and two projects are highway-related. Of these projects, only the two highway-related projects would affect Gaviota tarplant Critical Habitat. The Gaviota Culvert project would contribute to an adverse cumulative impact on Gaviota tarplant Critical Habitat. The other six projects would have impacts on jurisdictional areas and/or California red-legged frog. **Table 2-6** summarizes the areas of impact for Gaviota tarplant, Gaviota tarplant Critical Habitat, and jurisdictional areas. California red-legged frog impacts are discussed qualitatively, below.

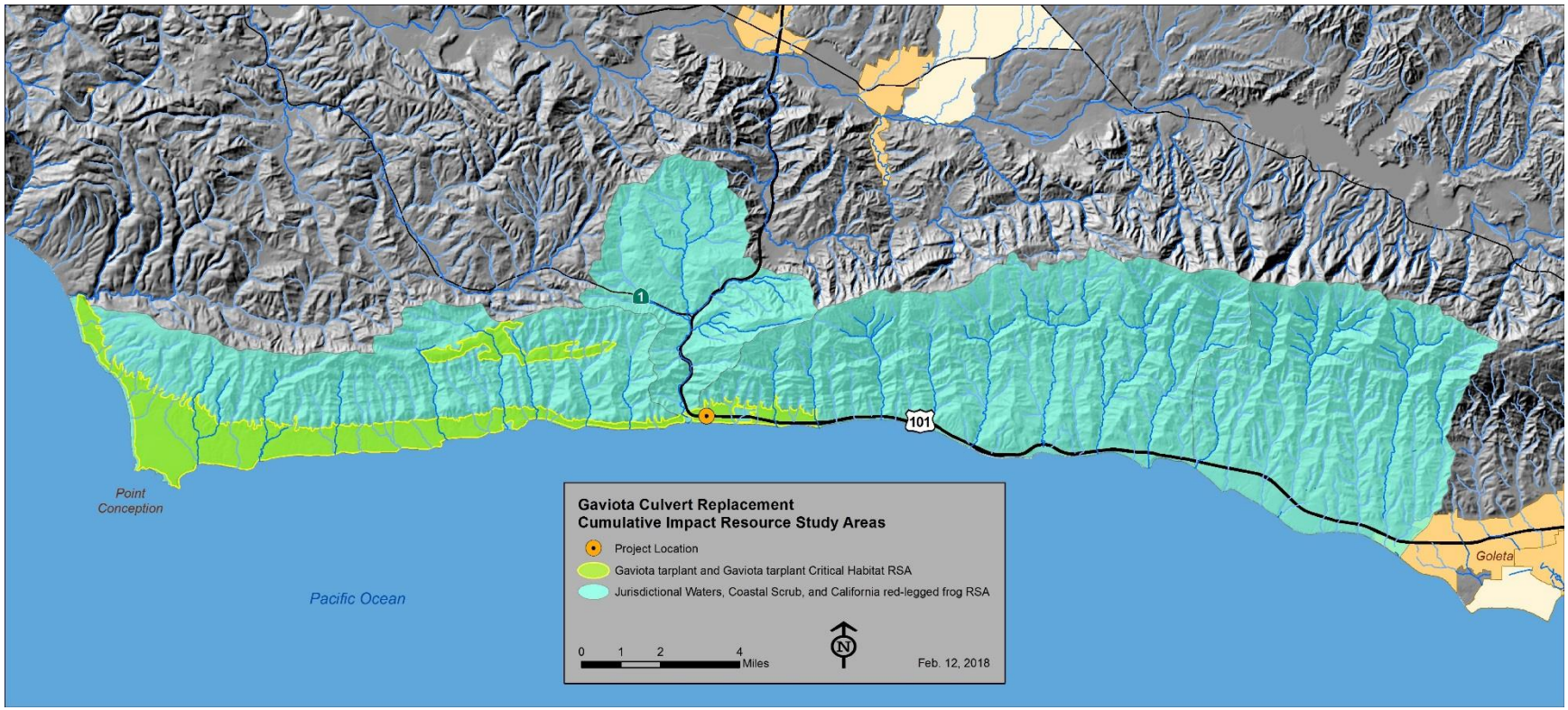


Figure 2-4: Cumulative Impact Resource Study Areas

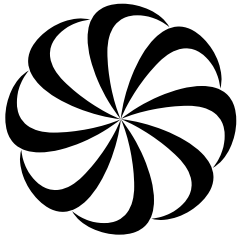


Table 2-6: Cumulative Impacts to Resources within the Resource Study Area

	Gaviota Tarplant	Gaviota Tarplant Critical Habitat	Coastal Scrub Habitat	Jurisdictional Areas (Including Riparian)
Permanent Impacts (acres)	None	>5.46	0.37	0.18008
Temporary Impacts (acres)	None	3.16	0.05	2.66508

California red-legged frogs: Two of the projects within the resource study area have identified no impacts to California red-legged frogs. Three projects within the resource study area have identified temporary impacts to upland and/or aquatic habitat, but no expected take of frog specimens. Two of the projects within the resource study area have identified both temporary and permanent impact to upland and/or aquatic habitat as well as the potential for direct take of individual specimens during construction.

In conclusion, cumulative impacts are occurring to Coastal shrub habitat, jurisdictional areas, Gaviota tarplant Critical Habitat, California red-legged frog, and coastal scrub habitat due to the number of projects within the resource study area that are having incremental impacts on these resources. Although it may appear that there is no cumulative impact occurring to the Gaviota tarplant, due to the limited range and protected status of the species, cumulative impacts are inferred.

This project's contribution to the cumulative impacts on these resources is less than significant with mitigation. The mitigation proposed by the project to offset impacts to these resources reduces the project's contribution to the identified cumulative impacts to less than significant.

Avoidance, Minimization, and Mitigation Measures

In addition to the measures identified in **Sections 2.2.1**, **2.2.2**, and **2.2.3** to avoid, minimize, and mitigate this project's potential impacts, the following is a list of potential measures that could be implemented by agencies with jurisdiction over the resources identified in this study to minimize potential cumulative impacts (CU).

CU-1. Upon approval by the California Coastal Commission, the County of Santa Barbara could finalize, adopt, and implement the draft Gaviota Coast Plan Local Coastal Land Use Plan.

CU-2. Because one of the main land uses within the Gaviota Coast is agriculture, the County and resource agencies could work to increase water use efficiency for agricultural users.[1]

[1] Santa Barbara County Conservation Blueprint, Creating a Landscape of Opportunity. 2017.

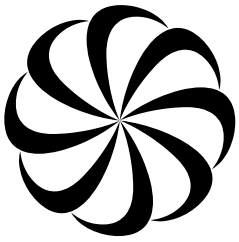
CU-3. The County could support ways to enhance and preserve habitat on ranch lands through incentives that provide economic benefit to the landowners and support the use of agriculture to enhance ecological conditions, combat harmful invasive species, and maintain ecosystems through incentives for participating landowners.[2]

CU-4. The County could work with California Fish and Wildlife Service and other agencies to identify potential areas for additional mitigation banking within the Gaviota tarplant Critical Habitat area on the Gaviota Coast.

CU-5. The County could support private land owners using incentive-based water and habitat conservation that produce mutually beneficial solutions to habitat preservation.[3]

CU-6. The County and resource agencies could support conservation focused on broad ecosystems and species communities for mutual benefits for multiple species.[4]

[2] Ibid.
[3] Ibid.
[4] Ibid.



Chapter 3 CEQA Evaluation

3.1 Determining Significance under CEQA

The proposed 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 Environmental Impact Statement (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 Environmental Impact Report (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. This checklist incorporates by reference the information contained in Chapters 1 and 2.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
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?	☐	☐	☒	☐
II. 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:				
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
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?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
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?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the			

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	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 of the document.			
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
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?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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	☐	☐	☒	☐

X. LAND USE AND PLANNING: Would the project:

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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
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?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
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?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV. 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:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
XVII. 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:				
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.	☐	☐	☐	☒
XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIX. MANDATORY FINDINGS OF SIGNIFICANCE				
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?	☐	☐	☐	☒

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 greenhouse gas emissions reduction and climate change research and policy. These efforts are concerned mostly with the emissions of greenhouse gases generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), 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.[5] In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.[6] The dominant greenhouse gas emitted is CO_2, 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 the activities and policies aimed at reducing greenhouse gas emissions to reduce 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 greenhouse gas emissions from transportation sources.

Federal

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

[5] https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014
[6] https://www.arb.ca.gov/cc/inventory/data/data.htm

The National Environmental Policy Act (NEPA) (42 United States Code 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 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. The Federal Highway Administration 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.[7] This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability."[8] 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 made 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. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The main goal of the program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

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

[7] https://www.fhwa.dot.gov/environment/sustainability/resilience/
[8] https://www.sustainablehighways.dot.gov/overview.aspx

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.

The U.S. EPA's authority to regulate greenhouse gas emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that greenhouse gases 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. Responding to the court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six greenhouse gases 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.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of greenhouse gas emission standards for new cars and light-duty vehicles in April 2010[9] 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 the National Highway Traffic Safety Administration 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 the National Highway Traffic Safety Administration, EPA, and Air Resources Board will decide on the Corporate Average Fuel Economy (CAFE) and greenhouse gas emissions standard stringency for model years 2022–2025. The National Highway Traffic Safety Administration 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 Donald Trump ordered the EPA to reopen the review and reconsider the mileage target.[10]

The National Highway Traffic Safety Administration 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 CO_2 emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

[9] https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy
[10] 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

State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing greenhouse gas 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 greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this order is to reduce California's greenhouse gas 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 greenhouse gas emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that the Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard (LCFS) for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The Air Resources Board 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 greenhouse gas 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 greenhouse gas 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 Air Resources Board 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): This order required state entities under the direction of the governor, including the Air Resources Board, 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): This order established an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs the Air Resources Board 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: This bill codifies the greenhouse gas reduction targets established in Executive Order 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 greenhouse gas emissions in California. AB 32 required the Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Air Resources Board in 2008 and must be updated every 5 years. The second updated plan, *California's 2017 Climate Change 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 greenhouse gas emissions. As part of its supporting documentation for the updated Scoping Plan, the Air Resources Board released the greenhouse gas inventory for California.[11] The Air Resources Board is responsible for maintaining and updating California's Greenhouse Gas Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated

[11] 2017 Edition of the GHG Emission Inventory Released (June 2017): https://www.arb.ca.gov/cc/inventory/data/data.htm

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 the Air Resources Board in demonstrating progress toward meeting the 2020 goal of 431 $MMTCO_2e$.[12] The 2017 edition of the greenhouse gas emissions inventory (released in June 2017) found total California emissions of 440.4 $MMTCO_2e$, showing progress toward meeting the AB 32 goals.

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 $MMTCO_2e$ total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 $MMTCO_2E$.

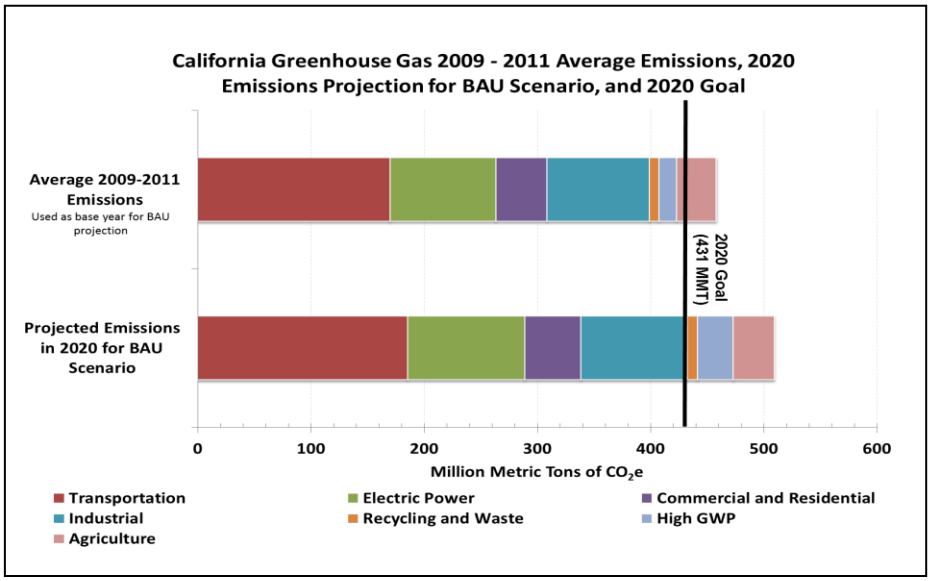


Figure 3-1: 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

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

Project Analysis

An individual project does not generate enough greenhouse gas 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 greenhouse gas.[13] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, you must compare the incremental impacts of the project with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

Greenhouse gas 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 greenhouse gas emissions related to the proposed project.

Construction Emissions

Construction greenhouse gas emissions would result from material processing, onsite 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 greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The project is expected to take five months to construct. The amount of greenhouse gas emissions, calculated as carbon dioxide equivalent, is 230 pounds per day and 12.7 US tons for the total duration of project construction.

Caltrans will require and ensure that construction equipment is maintained properly and therefore using fuel efficiently in order to minimize climate change emissions. Caltrans Standard Specifications, Section 14-9.02, Air Pollution Control, further requires contractors to comply with all federal, state, and local rules and regulations for air quality, some of which, such as idling restrictions, may help reduce GHG

[13] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

emissions. A transportation management plan will be implemented during construction to reduce traffic delays and associated emissions.

CEQA Conclusion

While the project will result 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 greenhouse gas reduction targets outlined in AB 32 and SB 32, Governor Edmund G. Brown Jr. identified key climate change strategy pillars (concepts). See **Figure 3-2.** These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 greenhouse gas emissions target. 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: Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve greenhouse gas 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. Greenhouse gas 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 Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Executive Order B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut greenhouse gas 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 greenhouse gas emissions. The plan 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 California Transportation Plan to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce greenhouse gas 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 greenhouse gas emissions, among other goals. Specific performance targets in the plan that will help to reduce greenhouse gas emissions include the following:

- Increasing percentage of non-auto mode share
- Reducing vehicle miles traveled per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce greenhouse gas emissions, Caltrans also administers several funding and technical assistance programs that have greenhouse gas 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).

The 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 greenhouse gas emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

The following minimization measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project.

GHG-1: Ensure maintenance of construction equipment.

GHG-2: Re-vegetate all disturbed soil areas following completion of construction. Landscaping reduces surface warming and through photosynthesis, removes carbon dioxide from the atmosphere.

GHG-3: In accordance with Caltrans' Standard Specifications, Section 14-9.02, Air Pollution Control, the contractor will comply with all federal, state, and local Air Pollution Control District rules, regulations, and ordinances regarding air quality.

A transportation management plan will be implemented during construction to minimize traffic delays and associated GHG emissions.

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 Council on Environmental Quality, 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[14], 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 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 a 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."[15]

To further the DOT Policy Statement, on December 15, 2014, the Federal Highway Administration issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*). This directive

[14] https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience
[15] https://www.fhwa.dot.gov/environment/sustainability/resilience/
[16] https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm

established a Federal Highway Administration policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration 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.

The Federal Highway Administration has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.[17]

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed Executive Order S-13-08, which directed a number of state agencies to address California's vulnerability to sea-level rise caused by climate change. This order 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),[18] 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 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 Executive Order 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),[19] 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

[17] https://www.fhwa.dot.gov/environment/sustainability/resilience/
[18] *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.
[19] http://www.climatechange.ca.gov/adaptation/strategy/index.html

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 Executive Order 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 Executive Order 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.

Executive Order 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." [20]

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 toward identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in Executive Order B-30-15.

This project is in the Coastal Zone. The Cañada del Barro drains water from the foothills of the Santa Ynez Mountains, through the culvert under US 101, under the Pacific Railroad tracks, and into the Pacific Ocean. At this location, the highway is approximately 900 feet from the ocean and at an elevation of approximately 143 feet above sea level. The culvert outlet is located approximately 650 feet from the ocean and at an elevation of approximately 62 feet above sea level. In this area, coastal bluffs line the shore, and at the project location, the Union Pacific Railroad is constructed on a berm that protects the culvert and highway from wave action. NOAA Sea Level Rise Viewer indicates, as depicted in **Figure 3-3**, that sea level rise would not affect the project location even if sea levels were to rise by 6 feet (the limit of the model).

[20] http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/

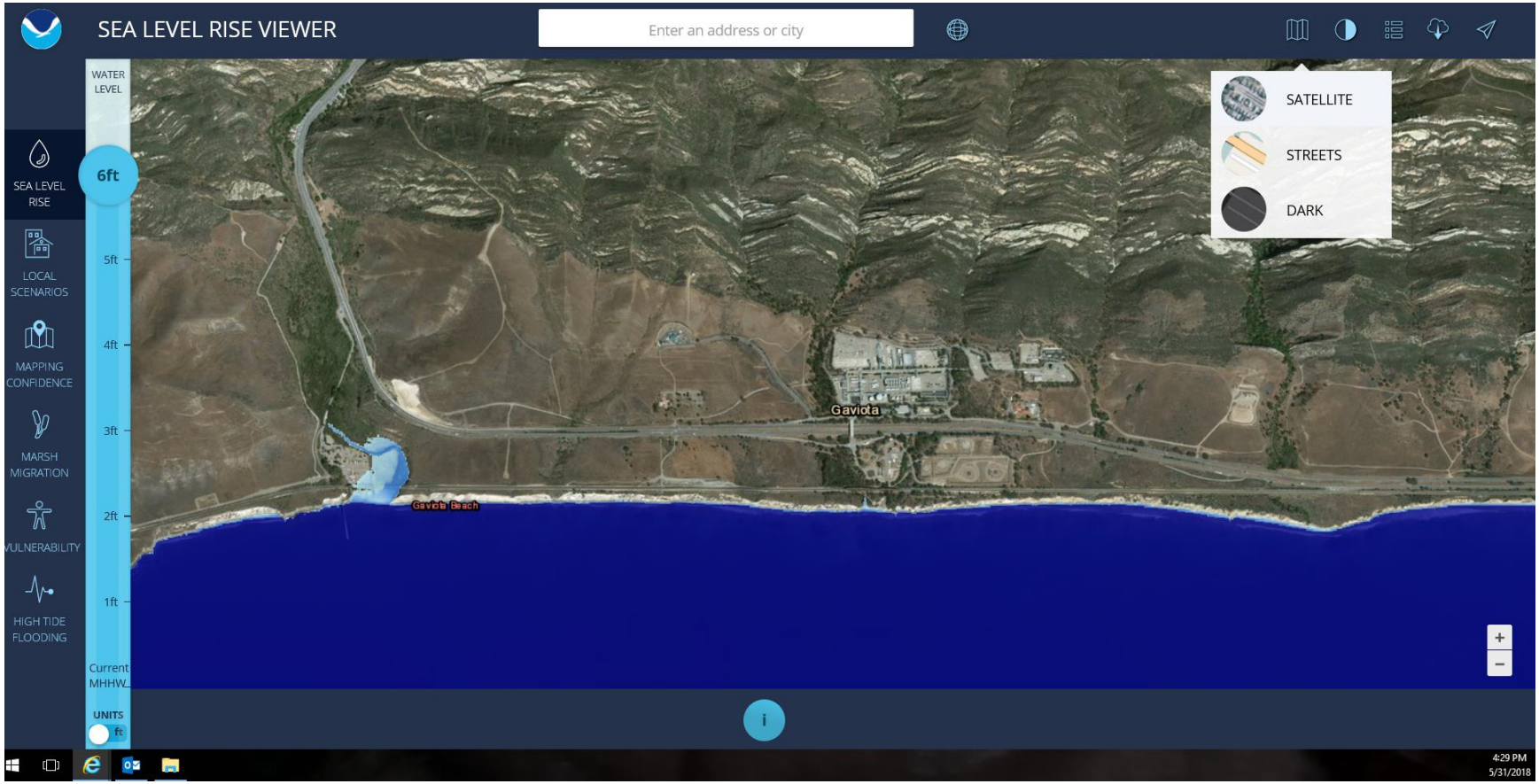
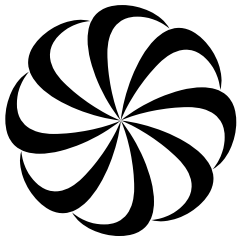


Figure 3-3: NOAA Seal Level Rise Viewer



Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings and Project Development Team (PDT) meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Agency Coordination:

December 2016. Caltrans contacted the California Coastal Commission to discuss impacts to jurisdictional areas.

July 2017. In response to a request from Caltrans, US Fish and Wildlife service provided a species list (**Appendix D**).

December 2017. Caltrans contacted California State Parks to request input on applicability of Section 4(f).

January 2018. Caltrans amended Section 4(f) applicability request.

February 2018. Caltrans' staff and State Parks' staff met at project site.

Comments received during the document circulation period (July 2, 2018 through July 31, 2018) and responses to those comments are included below.

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

July 31, 2018

Lara Bertaina
Associate Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA, 93401
lara.bertaina@dot.ca.gov

Dear Ms. Bertaina:

Gaviota Culvert Replacement Project on US 101 at Post Mile 45.5
MITIGATED NEGATIVE DECLARATION (MND)
SCH# 2018071001

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from California Department of Transportation (Caltrans) for the project pursuant 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 charged by law to provide, as available, biological expertise during public agency environmental review efforts, 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. As proposed, for example, the project may be subject to CDFW's lake and streambed alteration regulatory

[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.

authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Caltrans

Objective: The objective of the project is to repair damage and restore the culvert and wingwall to an existing 6' by 6' Reinforced Concrete Box (RCB)/6' Reinforced Concrete Pipe (RCP) culvert. Primary project activities include replacing the existing 475 linear feet of RCB/RCP with 500 linear feet of RCP. Additional actions include installation of Rock Slope Protection (RSP), an end wall and wing wall at the outlet, a headwall at the inlet, permanent and temporary access at both the inlet and outlet, and a new drainage inlet with riser pipe connected to the RCP at the northbound median shoulder.

Location: The project is located on US 101 in Santa Barbara County, at Post Mile (PM) 45.5 located on Cañada del Barro.

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.

I. Project Description and Related Impact Shortcoming

COMMENT #1:

Section 2.2.3, Page 28

Issue: The MND does not include a full assessment of species considered by CDFW to be sensitive or special status species. 1

Specific impact: The MND did not adequately consider species that may be rare as defined in CEQA guidelines section 15380. CDFW also did not observe an analysis of species that CDFW may consider sensitive or special status.

Why impact would occur: The MND evaluates potential impacts to threatened, candidate, and endangered species under the Federal Endangered Species Act (FESA) and CESA, but does not contain analysis for species considered by CDFW to be sensitive, special status, or rare (as defined in CEQA guidelines § 15380(b)(2)).

Evidence impact would be significant: The MND describes the area of potential impact (API) where the project would be conducted as dominated by coastal scrub communities, annual non-native grasslands, and arroyo willow thickets (*Salix lasiolepis*). These areas are located within Gaviota State Park in an area free from sanctioned trails, infrastructure, and public access, so they reasonably could support species that CDFW considers sensitive, special status, or rare (as defined in CEQA guidelines § 15380(b)(2)). The lack of evaluation for species that CDFW considers sensitive, special status, or rare may result in these species being present when the project is implemented, and they may not be adequately mitigated to less than significant levels. CDFW performed a record search (Nelson M. 2018) of the California Natural Diversity Database within the USGS Quadrangle for the project (Gaviota) and adjacent USGS Quadrangles and observed it includes species not considered in the MND discussion. (see Table 1.0 below).

Table 1.0 - List of Species from USGS Gaviota quadrangle and immediate adjacent quadrangles

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	CA Rare Plant Rank
Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	SSC	-
Taricha torosa	Coast Range newt	None	None	SSC	-
Accipiter cooperii	Cooper's hawk	None	None	WL	-
Aquila chrysaetos	golden eagle	None	None	FP ; WL	-
Buteo regalis	ferruginous hawk	None	None	WL	-
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None	None	WL	-
Falco mexicanus	prairie falcon	None	None	WL	-
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	-
Progne subis	purple martin	None	None	SSC	-
Icteria virens	yellow-breasted chat	None	None	SSC	-
Setophaga petechia	yellow warbler	None	None	SSC	-
Contopus cooperi	olive-sided flycatcher	None	None	SSC	-
Bombus caliginosus	obscure bumble bee	None	None	-	-
Bombus crotchii	Crotch bumble bee	None	None	-	-

Danaus plexippus pop. 1	monarch - California overwintering population	None	None	-	-
Neotoma lepida intermedia	San Diego desert woodrat	None	None	SSC	-
Taxidea taxus	American badger	None	None	SSC	-
Antrozous pallidus	pallid bat	None	None	SSC	-
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	-
Lasionycteris noctivagans	silver-haired bat	None	None	-	-
Myotis yumanensis	Yuma myotis	None	None	-	-
Anniella pulchra	northern California legless lizard	None	None	SSC	-
Emys marmorata	western pond turtle	None	None	SSC	-
Thamnophis hammondii	two-striped gartersnake	None	None	SSC	-
Phrynosoma blainvillii	coast horned lizard	None	None	SSC	-
Southern California Steelhead Stream	Southern California Steelhead Stream	None	None	-	-
Ancistrocarphus keilii	Santa Ynez groundstar	None	None	-	1B.1
Baccharis plummerae ssp. plummerae	Plummer's baccharis	None	None	-	4.3
Deinandra paniculata	paniculate tarplant	None	None	-	4.2
Erigeron sanctarum	saints' daisy	None	None	-	4.2
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	None	-	1B.1
Senecio aphanactis	chaparral ragwort	None	None	-	2B.2
Senecio aphanactis	chaparral ragwort	None	None	-	2B.2
Erysimum capitatum var. lompocense	San Luis Obispo wallflower	None	None	-	4.2

Erysimum suffrutescens	suffrutescent wallflower	None	None	-	4.2
Lonicera subspicata var. subspicata	Santa Barbara honeysuckle	None	None	-	1B.2
Atriplex serenana var. davidsonii	Davidson's saltscale	None	None	-	1B.2
Arctostaphylos pilosula	Santa Margarita manzanita	None	None	-	1B.2
Arctostaphylos purissima	La Purisima manzanita	None	None	-	1B.1
Arctostaphylos refugioensis	Refugio manzanita	None	None	-	1B.2
Astragalus didymocarpus var. milesianus	Miles' milk-vetch	None	None	-	1B.2
Thermopsis macrophylla	Santa Ynez false lupine	None	Rare	-	1B.3
Ribes amarum var. hoffmannii	Hoffmann's bitter gooseberry	None	None	-	3
Monardella hypoleuca ssp. hypoleuca	white-veined monardella	None	None	-	1B.3
Calochortus catalinae	Catalina mariposa-lily	None	None	-	4.2
Calochortus fimbriatus	late-flowered mariposa-lily	None	None	-	1B.3
Fritillaria ojaiensis	Ojai fritillary	None	None	-	1B.2
Calandrinia breweri	Brewer's calandrinia	None	None	-	4.2
Eriodictyon capitatum	Lompoc yerba santa	Endangered	Rare	-	1B.2
Cordylanthus rigidus ssp. littoralis	seaside bird's-beak	None	Endangered	-	1B.1
Polygala cornuta var. fishiae	Fish's milkwort	None	None	-	4.3
Delphinium umbraculorum	umbrella larkspur	None	None	-	1B.3
Ceanothus cuneatus var. fascicularis	Lompoc ceanothus	None	None	-	4.2
Horkelia cuneata var. puberula	mesa horkelia	None	None	-	1B.1

Horkelia cuneata var. sericea	Kellogg's horkelia	None	None	-	1B.1
Galium cliftonsmithii	Santa Barbara bedstraw	None	None	-	4.3
Scrophularia atrata	black-flowered figwort	None	None	-	1B.2
Thelypteris puberula var. sonorensis	Sonoran maiden fern	None	None	-	2B.2

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Project Description and Related Impact Shortcoming)

Mitigation Measure 1#:

To reduce impacts to less than significant: Prior to adopting the Final MND, Caltrans should conduct floristically based survey(s) conducted during appropriate timed period(s) to identify all species of plants in the API and in areas subject to indirect impacts. The results of the survey should be included in the Final MND. CDFW recommends floristic surveys adhere to the CDFW's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities. (See Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline, or generally https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#environmental%20review). CDFW recommends that the Final MND require plant surveys to be updated if surveys are older than two years and seasonal rainfall and reference conditions indicate reliable surveys may be conducted. Caltrans should commit to a mitigation measure in the Final MND should individuals of sensitive, special status, or rare species be subject to significant direct or indirect impacts. 2 3

Mitigation Measure 2#:

To reduce impacts to less than significant: Prior to adopting the Final MND, Caltrans should conduct a reconnaissance survey for bats within the API and adjacent areas. The survey should include initial daytime searches for visible observations of bats or their sign along with passive surveys at emergence and post-emergence periods. Surveys may include the use of acoustic recognition technology to maximize detection of bat species and to minimize impacts to sensitive bat species within the API and within 100 feet of suitable roosting habitat. Caltrans should commit to a mitigation measure should individuals of sensitive species be observed within the API or adjacent areas which are subject to significant indirect effects (e.g., noise, lighting, fuel emissions). CDFW must be consulted should non-passive survey methods be necessary to adequately determine effects on roost (e.g., species, sex, demographics) and to develop adequate mitigation measures. The results of the survey should be included in the Final MND. If effects of the 4

project will result in significant impacts to bats, then the Final MND should commit to mitigation measures to reduce significant impacts to less than significant. 4

To minimize significant impacts: To avoid the direct loss of bats that could result from removal of trees and/or structures that may provide maternity roost habitat (e.g., in cavities or under loose bark), CDFW recommends that the following measures be included in the Final MND:

A. To the extent feasible, tree removal should be scheduled between October 1 and February 28, outside of the maternity roosting season;

B. Each tree and/or structure identified as potentially supporting an active maternity roost should be closely inspected by the bat specialist no greater than 7 days prior to tree disturbance to more precisely determine the presence or absence of roosting bats;

C. If bats are not detected, but the bat specialist determines that roosting bats may be present at any time of year, it is preferable to push any tree down using heavy machinery rather than felling it with a chainsaw. In order to ensure the optimum warning for any roosting bats that may still be present, the tree should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree should then be pushed to the ground slowly and should remain in place until it is inspected by a bat specialist. Trees that are known to be bat roosts should not be sawed up or mulched immediately. A period of at least 24 hours, and preferably 48 hours, should elapse prior to such operations to allow bats to escape. Bats should be allowed to escape prior to demolition of buildings. This may be accomplished by placing one way exclusionary devices into areas where bats are entering a building that allow bats to exit but not enter the building;

D. Maternity season lasts from March 1st to September 30th. Trees and/or structures determined to be maternity roosts should be left in place until the end of the maternity season; and,

E. The bat specialist should document all demolition monitoring activities, and prepare a summary report to Caltrans upon completion of tree disturbance and/or building demolition activities.

II. Environmental Setting and Related Impact Shortcoming

COMMENT #2:

Section 2.2.1, Page 15

Issue: The MND does not disclose overall project impacts to existing vegetation communities. The MND only discloses impacts potentially subject to additional responsible agency action (e.g., Fish & G. Code §1600 *et seq.*, FESA), and does not analyze overall 5

impacts to determine significance of impacts. Other vegetation communities subject to temporary or permanent impacts include *Salix lasiolepis* shrubland alliance, Coastal scrub habitat (includes *Baccharis pilularis* shrubland alliance, *Artemisia californica* shrubland alliance, *Elymus condensatus* herbaceous alliance, *Toxicodendron diversilobum* shrubland alliance, and *Salvia mellifera* shrubland alliance) *Avena barbata* semi-natural herbaceous alliance, non-native disturbed, and ornamental habitat. 5

Specific impact: The MND discloses that the project would permanently and temporarily impact 0.37 acre and 0.85 acre, respectively, of coastal scrub habitat (MND page 18), but significant portions of other abovementioned vegetation communities would be impacted and are unanalyzed. CDFW could not determine the area of each community, analysis of impacts on each vegetation community, and how avoidance and minimization measures proposed (fencing of maximum disturbance limits [NC-1] and avoidance/minimization measures to limit spread of invasive weed [NC-2]) would reduce impacts to less than significant. 6 7

Why impact would occur: The MND graphically shows permanent and temporary impacts in Figure 2-2 (Biological Communities Affected) to *Salix lasiolepis* shrubland alliance, Coastal scrub habitat, *Avena barbata* semi-natural herbaceous stands, and non-native disturbed and ornamental habitat. Permanent impacts would result from installation and maintenance of gravel roads, headwalls, wingwalls, and RSP. Temporary impacts would result from jacking and receiving pits, access roads, and the dewatered work area.

Evidence impact would be significant: Permanent and temporary impacts would result in fragmentation of remaining habitat, introduction of invasive plant species, anthropogenic disturbance, increased fire frequency, and conversion of existing vegetation communities to disturbed habitat. Due to the length and location of these impacts, CDFW believes these impacts would remain significant without active restoration of effected vegetation communities through revegetation, monitoring, maintenance, and removal of non-native plants and animals.

For example, the project was identified to have 0.60 acre and 2.52 acres of permanent and temporary impact on Gaviota tarplant (*Deinandra increscens* ssp. *villosa)* designated critical habitat under FESA. MND mitigation measure (TRD-19) was proposed to reduce project impacts on Gaviota tarplant "by revegetating with an assemblage of native riparian, wetland, and upland vegetation suitable for the project area, and this would be conducted in all areas disturbed by activities associated with the project." However, TRD-19 only generally describes this measure and does not commit to implementation if US Fish and Wildlife Service and Caltrans determine that it is not feasible or practical. When project mitigation measures are proposed in an MND, it must be virtually certain that a proposed project (along with its mitigation measures) will have no significant impacts. Such certainty is not possible if relevant information about the affected environment and the determination that impacts can be mitigated are deferred to the future.

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Environmental Setting and Related Impact Shortcoming)

Mitigation Measure 1#:

To reduce impacts to less than significant: The Final MND should disclose all permanent and temporary project impacts to all existing vegetation communities. Compensatory mitigation should be committed to mitigate the loss of sensitive vegetation communities including *Salix lasiolepis* shrubland alliance, Coastal scrub habitat and *Avena barbata* semi-natural herbaceous alliance not subject to additional responsible agency action (e.g., Fish & G. Code §1600 *et seq.,* FESA). CDFW recommends that any mitigation for unavoidable impacts to biological resources take place in this order of preference: onsite, offsite within the Cañada Barro watershed, and offsite within the greater Jalama-Frontal Santa Barbara Channel watershed (Watershed Boundary Dataset [HUC-10]). Compensatory mitigation should be conducted at locations that lend themselves to creation, restoration, and/or enhancement opportunities. The compensatory mitigation must also be committed to being implement and meet identified performance standards in the Final MND. Project creation, restoration, and/or enhancement should be protected and managed in perpetuity by an entity authorized by Government Code Section 65965-65968. 8

COMMENT #3:

Section 2.2.1, Page 15

Issue: CDFW reviewed the MND using both the Holland Code and the Manual of California Vegetation (MCV) to classify vegetation communities, resulting in an incomplete or inaccurate description of the physical conditions for the project. For example, the MND's description of grassland vegetation communities "annual non-native grasslands" is defined as introduced grasses such as ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), and red brome (*Bromus madritensis ssp. rubens*). However, Figure 2-1 uses a different name to map the same vegetation community called *Avena barbata* semi-natural herbaceous stands, which is a classification from MCV. Additionally, the Natural Environment Study (NES) that the MND used to evaluate environmental consequences of the project did not completely evaluate whether purple needlegrass (*Nassella pulchra*) is a significant component of on-site grasslands. This species was documented on-site in the NES (see Appendix D). Purple needlegrass species may be regularly occurring on site and with sufficient cover to evaluate it as a vegetation Alliance (see MCV purple needlegrass grassland Alliance http://vegetation.cnps.org/alliance/436). The significance of purple needlegrass in on-site grasslands and its removal as an environmental consequence of the project should have been evaluated in the MND. 9 10

Specific impact: Wild oats, annual bromes, and annual native plants occur in similar habitats but, *Avena spp.* stands have some ecological distinctions from those dominated by the shorter annual bromes. Without a complete and accurate description of the existing physical conditions within the API the MND likely provides an inaccurate analysis of project

related effects. The MCV (see http://vegetation.cnps.org/alliance/326) defines membership in *Avena barbata* semi-natural herbaceous stands as either: > 50% relative cover, and native herbs < 10% relative cover in the herbaceous layer; OR > 75% relative cover; other non-native or native plants < 5% absolute cover, if present, in the herbaceous layer. The written description in MND does not document any *Avena spp.* As occurring within the designated "annual non-native grasslands" vegetation community.

Why impact would occur: The MND analysis was based on information in the Natural Environment Study (NES) (MND page 14). The NES described a similar vegetation community as the MND, but designated it as "non-native grassland/*Avena barbata* semi-natural herbaceous stand" (NES page 24). Both the MND and NES were observed to have a similar description of this vegetation community being dominated by bromes. This description varies significantly from membership requirements in the MCV for *Avena barbata* semi-natural herbaceous stands. Regardless of the vegetation community's name it would be subject to temporary and permanent impacts (see MND Figure 2-2). 11

Evidence impact would be significant: A complete and accurate description of the non-native grasslands is important because stands strongly dominated by *Avena* spp. often have plants of conservation value. The Gaviota coast mountains have unique soils and geology that support native plant species with ranges limited to these unique soils, and they may occur for brief periods that coincide with seasonal nature of *Avena* spp. Additionally, native species may have low percentage cover compared to non-native species but are present in significant quantities nearly every year and occur at a frequency to establish them as a component of the vegetation community. Consistent occurrence or even distribution of these species can help to maintain important ecological functions that are still occurring for native species (e.g. plants or wildlife).

For example, purple needlegrass species were documented in the NES as observed on site (Appendix D). Purple needlegrass grassland Alliance is ranked as S3 or vulnerable in California based on a moderate risk of extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

Mitigation Measure 1#:

To reduce impacts to less than significant: CDFW recommends the Final MND follow the Second Edition of the Manual of California Vegetation (MCV), and provide summaries of all permanent and temporary impacts to vegetation communities. The California Native Plant Society website (http://vegetation.cnps.org/classifications) and the MCV provide a classification conversion that will allow Caltrans to cross reference the Holland Code into the standardized statewide (compliant with the National Vegetation Classification Systems) nomenclature supported by the CDFW.

Mitigation Measure 2#:

To reduce impacts to less than significant: If new vegetation communities are identified that don't conform to the MCV the Final MND should disclose all permanent and temporary

project impacts to all newly classified vegetation communities. The Final MND should provide analysis of whether these impacts would remain significant without avoidance, minimization, or compensatory mitigation. The Final MND should commit to avoidance, minimization, and compensatory mitigation of newly classified vegetation communities identified in the project. CDFW recommends that compensatory mitigation for minimized unavoidable impacts to biological resources take place in this order of preference; onsite, offsite within the Cañada Barro watershed, and offsite within the greater Jalama-Frontal Santa Barbara Channel watershed (Watershed Boundary Dataset HUC 10). Compensatory mitigation should be conducted at locations that lend themselves to creation, restoration, and/or enhancement opportunities and wildlife movement preservation and which can be protected and managed in perpetuity by an entity authorized by Government Code Section 65965-65968.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that 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 (CNDDB). The CNNDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The project, as proposed, 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 in order 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 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.

Sincerely,

Ms. Erinn Wilson
Environmental Program Manager

Reference:

Nelson M. "California Natural Diversity Database (CNDDB) Government [ds45]." 2 Jul 2018. Biogeographic Information and Observation System (BIOS). Calif. Dept. of Fish and Wildlife. 17 Jul 2018, http://bios.dfg.ca.gov

cc: Office of Planning and Research, State Clearinghouse, Sacramento

ec: Matt Fowler, matt.c.fowler@dot.ca.gov

Responses to California Department of Fish and Wildlife comments

1. Caltrans has provided an Addendum to the Natural Environment Study (NES) and updated the Final Environmental Document **Section 2.2.3** to include all species considered by CDFW to be sensitive or special status species.

2. Caltrans conducted botanical surveys monthly, in some cases bi-monthly, from between March 23, 2017 through October 5, 2017. Botanical surveys adhered to the California Department of Fish and Game 2009 protocols for surveying and evaluating impacts to special status native plant populations and natural communities, as cited in the NES.

3. A qualified Caltrans biologist will conduct rare plant surveys annually until project construction begins.

4. Caltrans conducted passive bat surveys as part of the "reconnaissance wildlife surveys" described in the NES. Suitable bat roosting habitat or activity was not identified within the project area; however, it is possible that bats could move into the project area before construction; therefore, direct and indirect impacts could occur. Additional discussions about bats and proposed minimization measures have been added in **Section 2.2.3** of the Final Environmental Document.

5. Impacts to existing vegetation communities have been added to **Section 2.2.1** of the Final Environmental Document, see **Table 2-2**.

6. Due to the decision to remove the permanent access roads from the project, the impact numbers have been reduced, as described in **Table 2-2** of the Final Environmental Document.

7. **Table 2-2** has been added to the Final Environmental Document to depict the acreage impacts for each vegetation community. Additional mitigation measures, **NC-3** through **NC-5** have been added to limit the spread of invasive weeds. Mitigation measures **NC-6** and **NC-7** have been added to offset direct impacts to Coastal Scrub habitat.

8. As described in **Section 2.2.1** mitigation measures **NC-6** and **NC-7** will offset impacts to Coastal scrub habitat at 2:1 ratio for permanent impacts and 1:1 ratio for temporary impacts within the existing project limits.

9. The mapped alliance, *Avena barbata* semi-natural herbaceous stands (wild oats grasslands), was incorrectly described in the original NES and Draft Environmental Document. The description for annual non-native grassland was given. This has been corrected and an accurate description and survey results are now given for wild oats grasslands in the NES Addendum and **Section 2.2.1** of the Final Environmental Document.

10. A steatment has been added to **Section 2.2.1** of the Final Environmental Document to reflect an existing discussion in the NES on purple needlegrass habitat. The NES explains that purple needlegrass does not occur on site with sufficient cover (greater than 10% relative cover or 5% absolute cover) to be evaluated as a vegetation alliance. It is a minor component of the wild oats grasslands habitat; therefore, mitigation will not be provided, however habitat that may encourage natural succession of purple needlegrass will be created.

11. As described in response to comment 9, the description of the vegetation community has been corrected.

STATE OF CALIFORNIA -- NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., Governor

CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

August 1, 2018

Lara Bertaina
Associate Environmental Planner
Department of Transportation (Caltrans) District 5
50 Higuera Street
San Luis Obispo, CA 93401

RE: Comments on the Initial Study with Proposed Mitigated Negative Declaration for the Gaviota Culvert Replacement Project

Dear Lara,

On July 2, 2018, our office received the subject Initial Study/Mitigated Negative Declaration (IS/MND) for the Gaviota Culvert Replacement Project at mile marker 45.5 along Highway 101 near Gaviota State Park. The Gaviota Culvert Replacement Project is located within the County of Santa Barbara's Local Coastal Plan appeals jurisdiction area. Accordingly, after reviewing the submitted IS/MND, Commission staff has identified several concerns with the current project design and its potential non-conformity with the policies of the County's Local Coastal Program (LCP) and the Coastal Act. Since the proposed development requires a Coastal Development Permit from Santa Barbara County that would be appealable to the Coastal Commission, we would like to provide the following comments regarding the provided analysis and siting of the two new gravel access roads and the provided analysis and siting of the new culvert. As you are aware, some of the LCP and Coastal Act policies that pertain to the proposed project include:

LCP Policy 1-1, incorporating Section 30231 of the Coastal Act, which states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

LCP Policy 1-1, incorporating Section 30107.5 of the Coastal Act and Article II, Section 35-58 of the certified LCP, which state:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

LCP Policy 1-1, incorporating Section 30240 of the Coastal Act, which states:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

LCP Policy 2-11, which states:

All development, including agriculture, adjacent to areas designated on the land use plan or resource maps as environmentally sensitive habitat areas, shall be regulated to avoid adverse impacts on habitat resources. Regulatory measures include, but are not limited to, setbacks, buffer zones, grading controls, noise restrictions, maintenance of natural vegetation, and control of runoff.

LCP Policy 9-38, which states:

No structures shall be located within the stream corridor except: public trails, dams for necessary water supply projects, flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development; and other development where the primary function is for the improvement of fish and wildlife habitat. Culverts, fences, pipelines, and bridges (when support structures are located outside the critical habitat) may be permitted when no alternative route-location is feasible. All development shall incorporate the best mitigation measures feasible.

LCP Policy 1-1, incorporating Section 30233 of the Coastal Act, which states:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following...

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable longshore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...

LCP Policy 9-9, which states:

A buffer strip, a minimum of 100 feet in width, shall be maintained in natural condition along the periphery of all wetlands. No permanent structures shall be

permitted within the wetland or buffer area except structures of a minor nature, i.e., fences, or structures necessary to support the uses in Policy 9-10.....

LCP Policy 9-36, which states:

When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of roads or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees.

Collectively, these policies limit development in and around environmentally sensitive habitat areas, stream corridors, and wetlands. These policies not only limit the type of development that can be permitted within these resources, but also provide that development must be sited and designed to prevent impacts to these resources such that no less environmentally damaging or feasible alternatives exist for the project and measures to mitigate potential impacts are implemented to the maximum extent possible.

It is our understanding that the project proposes to replace an existing 6 ft. by 6 ft. reinforced concrete box (RCB) and an existing 6 ft. wide, 475 ft. long reinforced concrete pipe (RCP) culvert located within Cañada del Barro stream due to existing deterioration within the culvert. The proposed replacement culvert would be approximately 500 ft. long and composed of RCP. The proposed project would utilize jack and bore construction methods to install the new RCP on a new alignment adjacent to the existing RCB and RCP culvert, and the existing RCB and RCP would be abandoned in place. In order to reach the project site with the equipment necessary for construction of the new culvert, the project also proposes to construct two permanent gravel access roads to connect the highway to both the inlet and outlet areas of the project site.

Based upon the information submitted in the IS/MND, it appears that the proposed siting of the new culvert and the two new gravel access roads would adversely impact (both temporarily and permanently) riparian, wetland, and stream habitat areas. Specifically, the proposed project is anticipated to temporarily impact 0.84 acres of coastal scrub habitat, 0.11 acres of stream habitat, 0.00007 acres of wetlands, and 0.14 acres of riparian habitat. Additionally, the project is anticipated to permanently impact 20 Arroyo Willows, 0.37 acres of coastal scrub habitat, 0.01 acres of stream habitat, 0.00008 acres of wetlands, and 0.03 acres of riparian habitat. As noted in the IS/MND, coastal scrub habitat is known to provide critical habitat for Gaviota Tarplant. The subject riparian, wetland, and stream habitat areas are also designated as environmentally sensitive habitat area (ESHA) within the County's LCP.

While an explanation of the temporary need for access roads to facilitate the ability of large construction equipment to reach the project site is provided in the IS/MND, there is no detailed rationale provided for the permanent retention of the two gravel access roads. Additionally, the permanent siting of access roads within ESHA is prohibited pursuant to LCP Policies 2-11 and 9-9, and Policies 30231, 30233, and 30240 of the Coastal Act

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which have been incorporated into the County's LCP through Policy 1-1 of the LCP. Specifically, Coastal Act Policy 30240 protects coastal resources by prohibiting any land use within ESHA unless such use is dependent on the resource(s) present, and Policy 2-11 of the County's LCP prohibits new development from adversely impacting ESHA. Further, LCP Policy 9-36 requires new development to be sited and designed in a manner to minimize adverse impacts to native vegetation. 1

Although permanent access roads for the construction and maintenance of drainage culverts are not considered a resource dependent use, coastal trails that provide public access are considered a resource dependent use. Accordingly, the siting of public trails within environmentally sensitive habitat area is an allowed use that may be found consistent with the requirements of the County's LCP and the Coastal Act. For the proposed permanent gravel access road on the south side of the highway, Commission staff would suggest that the MND include a detailed analysis of an alternative alignment and design that involves aligning the access road with the planned coastal trail (see attached "Gaviota Coast Plan – Proposed Trails" Map for the Gaviota Coast Plan that is pending certification by the Coastal Commission) that extends to the creek crossing immediately adjacent to the subject drainage outlet from a utility road to the southeast. If the access road could be designed and aligned to serve as a future segment of the coastal trail, which is an allowed use in ESHA pursuant to the County's LCP and the Coastal Act, it may also function as an access road for future maintenance of the new culvert. 2

Additionally, the IS/MND states that alternative configurations for the proposed access roads were considered, and further, that the proposed access roads alignments would minimize adverse impacts to sensitive coastal resources. However, the IS/MND does not provide a detailed analysis of the alternative configurations that were considered. Please provide detailed analysis regarding the various configurations of the two proposed access roads that have been considered, including an analysis of realigning/redesigning the proposed road on the south side of the highway to coincide with the planned coastal trail so that it may also serve as a segment of the coastal trail in the future. Please also provide an analysis of the proposed grading required for construction of the access roads. 3 4

While the IS/MND notes that the proposed new culvert is necessary to avoid potential flooding of the highway, and new development that is necessary for the protection of existing development and public safety may be allowed pursuant to LCP Policy 9-38, Coastal Act Policy 30240 and LCP Policy 2-11 require such development to be designed and sited to avoid impacts to ESHA to the maximum extent feasible. The IS/MND proposes to abandon the existing drainage culvert in place and install the new culvert alongside the existing culvert. However, the IS/MND does not provide sufficient detail regarding the location of the existing culvert that is intended to be abandoned in place, or the proposed new footprint of development (including square footage) that includes both the existing culvert and the new culvert, or a detailed analysis that explains why the existing culvert must be abandoned in place. Please provide such clarifications, including a detailed justification as to why the existing culvert must be abandoned in place. 5

Thank you for the opportunity to provide comments on the proposed project. Please let me know if you have any questions regarding comments provided. I can be reached at (805) 585-1800.

Sincerely,

Megan Sinkula
Coastal Program Analyst

5

Reponses to California Coastal Commission

1. Caltrans' Maintenance Division requested permanent access to the inlet and outlet of the culvert for maintenance and survey purposes. Upon receipt of public comments on the project, Caltrans has determined that the permanent

access roads can be eliminated. The proposed access roads will be regraded and replanted upon completion of construction.

For detailed information about the design of alternative access roads, please refer to comments 3 and 4.

2. Although Caltrans appreciates the proposed solution that would benefit both Caltrans' and the public's interests, in order to meet the project schedule, cost, and scope, the coastal trail cannot be accommodated as part of this project. The proposed permanent access roads will be removed, regraded, and replanted upon completion of construction.

3. During a field meeting, representatives from State Parks recommended two alternative alignments for the access roads: one on the inlet side and one on the outlet side, as depicted in **Figure 4-1**. Caltrans' Design Division explored these options by designing access roads using these routes, including required grading, and found that they had greater impacts on sensitive coastal resources, as described below in response to comment 4. They were subsequently rejected.

4. As shown in **Table 4-1**, including required cut and fill slopes, the rejected access road on the northbound side of the highway would affect approximately 1.01 acres of coastal scrub habitat. The rejected access road on the southbound side of the highway would affect approximately 0.83 acre of coastal scrub habitat. The proposed northbound access road would affect approximately 0.95 acre of coastal scrub habitat. The proposed southbound access road would affect approximately 0.80 acre of coastal scrub habitat.

Table 4-1: Access Road Impact Area

Alternative	Area of Impact (acre)
NB Rejected	1.01
SB Rejected	0.83
NB	0.95
SB	0.80

5. The existing culvert requires replacement, as described in **Section 1.2.1**, due to the evidence of impending failure of the culvert and inlet wingwall in the existing culvert structure which may require closure of US 101. Mapping has been added to the document (**Figures 1-2** and **1-3**) that depicts the location of the existing culvert. The existing culvert must be abandoned in place because the footprint required to remove the existing culvert would be enormous resulting in acres of impacts to surrounding ESHA and temporary diversion of traffic on US 101.

As depicted in **Figure 1-3**, the new culvert inlet and outlet are aligned very closely with the existing inlet and outlet.

The existing RCB/RCP culvert has three angle points and consists of 270 linear feet of 6-foot x 6-foot RCB and 230 linear feet of 72-inch RCP. In order to replace the existing culvert, a pit would have to be dug to a depth of 18 to 78 feet with 2:1 slopes; US 101 would have to be closed in both directions for two to three months; and, overhead communication lines in both the northbound and southbound directions would need to be relocated. Therefore, the impacts to replace the existing drainage system in place would be unacceptably higher that the proposed project.

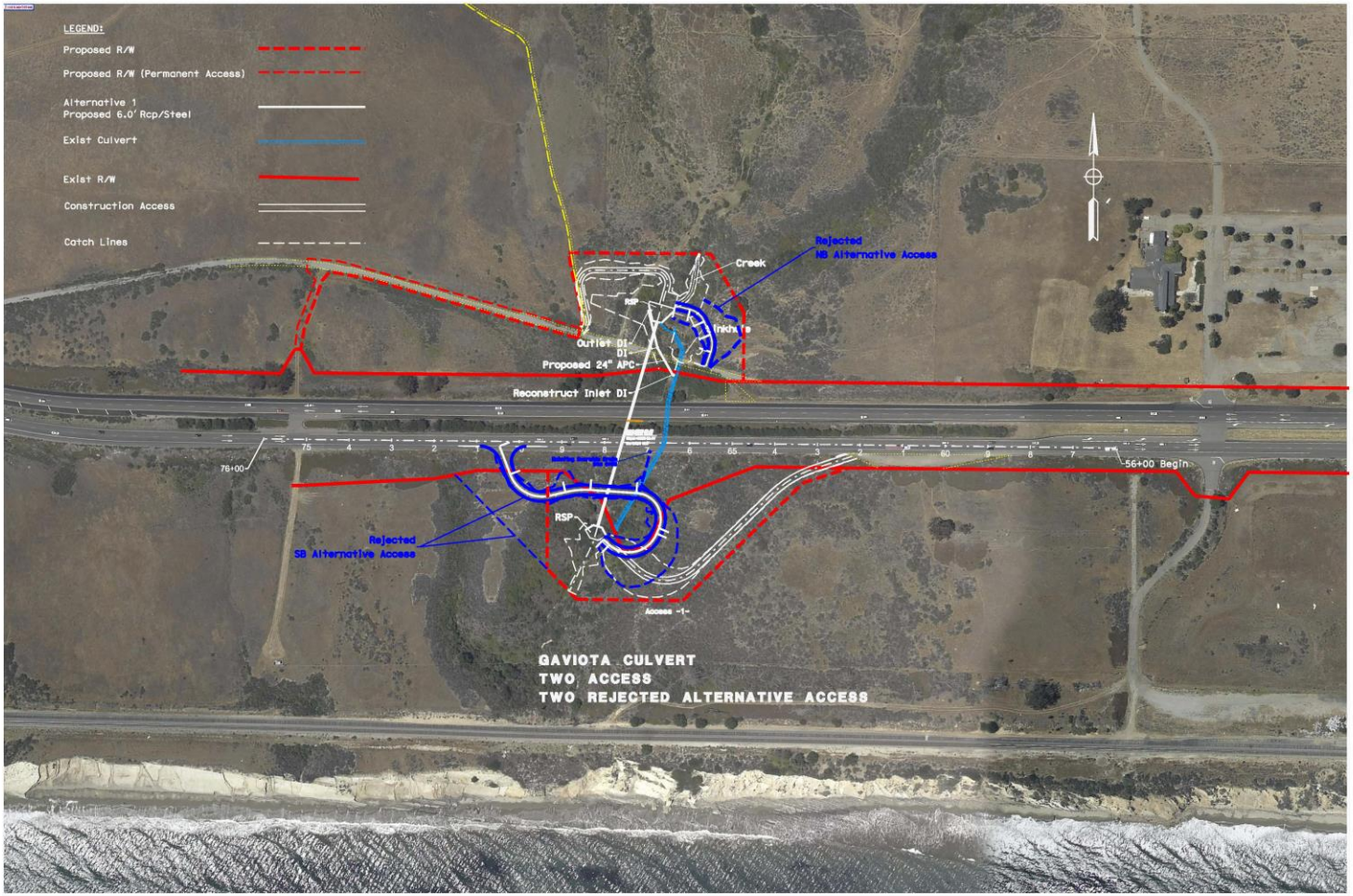
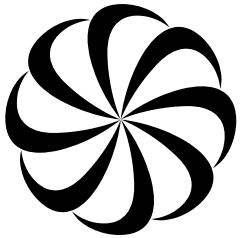


Figure 4-1: Rejected Access Roads



Chapter 5 List of Preparers

This document was prepared by, or included technical input from, the following Caltrans Central Region staff:

Paul Andreano, Associate Environmental Planner (Natural Sciences). B.S., Ecology and Systematic Biology, Minor in Geography, California Polytechnic State University, San Luis Obispo; more than 20 years of environmental planning and biological sciences experience. Contribution: Field studies, documentation, regulatory permitting, monitoring, and reporting.

Lara Bertaina, Senior Environmental Planner. B.A., Environmental Studies and Planning, Sonoma State University; 2 years of urban planning and 18 years of environmental planning experience. Contribution: Coastal policy analysis; Cumulative impact analysis; Draft Environmental Document preparation and processing.

Robert Carr, Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic State University, San Luis Obispo; 28 years of experience preparing Visual Impact Assessments. Contribution: Visual Impact Assessment.

Matt Fowler, Senior Environmental Planner. B.A., Geographic Analysis, San Diego State University; 17 years of experience in environmental planning. Contribution: oversight of the Initial Study.

Terry L. Joslin, Associate Environmental Planner (Arch). M.A., Anthropology, University of California, Santa Barbara; B.S., Anthropology/Geography, California Polytechnic State University, San Luis Obispo; more than 20 years of archaeology experience. Contribution: Historic Property Survey Report.

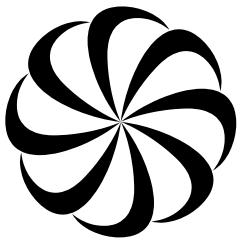
Joel Kloth, Engineering Geologist. B.S., Geology, California Lutheran University; more than 30 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Hazardous Waste Studies.

Lindsay Kozub, Associate Environmental Planner (Architectural Historian). M.A., History/Cultural Resource Management, Colorado State University; B.A., History, University of Montana; B.S., Business, Montana State University; 8 years of experience in historical and architectural documentation, historic preservation, and cultural resource management. Contribution: Architectural Survey Report.

Isaac Leyva, Engineering Geologist. B.S., Geology; 28 years of experience in petroleum geology, environmental geology, geotechnical engineering. Contribution: Water Quality Analysis Memorandum.

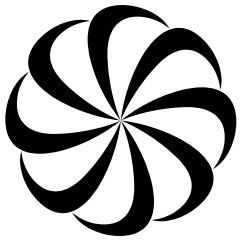
Ed Schefter, Senior Transportation Surveyor. B.S., Surveying, California State University, Fresno; more than 20 years of GPS/GIS experience. Contribution: Project mapping.

Vladimir Timofei, Transportation Engineer. M.S., Civil Engineering, California State University, Fullerton; 17 years of environmental technical studies experience. Contribution: Air Quality Memorandum and Noise Memorandum.



Chapter 6 Distribution List

Agency	Number of Copies
California State Parks Channel Coast District 911 San Pedro Street Ventura, CA 93001-3744 (805) 585-1850	1
California Department of Fish & Wildlife South Coast Region (Region 5) 3833 Riffin Road San Diego, CA 92123	1
California Coastal Commission 89 S. California Street #200 Ventura, CA 93001	1
County of Santa Barbara 123 East Anapamu Street Santa Barbara, CA 93101	1



Appendix A Section 4(f)

This section of the document discusses de minimis impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This amendment provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including de minimis impact determinations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

A portion of Gaviota State Park property would be affected by the proposed project due to the location of the culvert. In order to construct and maintain the culvert, Caltrans requires temporary and permanent access from California State Parks. A temporary easement would be necessary along the old highway alignment on the north side of US 101, totaling approximately 0.45 acres, in total. Approximately 2.5 acres between the old highway alignment and US 101 would be needed for planting. This area could be permanently acquired or a temporary easement could be obtained in order to plant and maintain planting. Approximately 5 acres would be acquired for construction and maintenance access on both sides of the highway. **Table A-1** further describes the areas needed.

Table A-1 Gaviota State Park Acquisition Requirements

APN	Total Parcel Size in Acres	Area Needed for Project in Acres	Percentage of Whole Parcel Needed	Purpose
081-270-003	452.22	2.47	0.55	Construction Laydown and Mitigation Permanent or Temporary

081-270-003	452.22	0.44	0.09	Permanent Access Easement
081-270-003	452.22	0.29	0.06	Permanent Access Acquisition
Total	452.22	3.2	0.7	--
081-130-072	32.03	2.17	6.7	Permanent Access Acquisition
081-130-05462.06	62.06	2.56	4.1	Permanent Access Acquisition
Total	546.31	7.93	--	--

On December 3, 2018, California State Parks concurred with Caltrans' determination that the proposed project would have a minimal impact to this Section 4(f) resource that would not be considered adverse. The 4(f) determination is based on the following:

- There is no prudent nor feasible alternative
- All possible planning has been taken to minimize harm
- The area is currently inaccessible to the public
- The area is not currently established or managed as an active park facility
- The property reductions would equate to less than 1% of the entire Gaviota State Park property as a whole.

State of California • Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Channel Coast District
911 San Pedro Street
Ventura, CA 93001

Edmund G. Brown Jr., *Governor*
Lisa Ann L. Mangat, *Director*

December 3, 2018

Lara Bertaina, Senior Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401-5415

Re: Gaviota Culvert Replacement 4(f) *de minimis* Determination

To satisfy section 4(f) of the Department of Transportation Act of 1966 (49 US Government Code 303) requirements for your above referenced project, the California Department of Parks and Recreation (State Parks) is submitting this letter to confirm our understanding of the proposed project and our approval of the proposed measures to avoid impacts and minimize harm to the 4(f) resources at Gaviota State Park.

As outlined in the letter of October 26, 2018, the California Department of Transportation (Caltrans) requires access to Gaviota State Park for the Gaviota Culvert Replacement Project. The project aims to replace an existing, deteriorating Reinforced Concrete Box/Reinforced Concrete Pipe culvert on US 101 at Post Mile 45.5, which is surrounded by Gaviota State Park property. To construct and maintain the culvert, Caltrans requires temporary and permanent access from State Parks for parcels APN 081-270-003, 081-130-072, and 081-130-054, which are located in an area of the Park that is currently inaccessible to the public. Access is required to construct access roads to the inlet and outlet of the culvert and to provide mitigation of permanent and temporary impacts to Coastal Scrub Environmentally Sensitive Habitat. In total, Caltrans will need to use a total of 7.93 acres of the approximately 2,775 acres of the Gaviota State Park property. This constitutes approximately 0.28 percent of the entire park acreage.

California State Parks understands the importance of replacing the damaged culvert before it deteriorates further. We also believe Caltrans avoided impacts to State Park property to the maximum extent possible given the feasibility of the various realignment alternatives. Based on our review of the project design, it is our belief that this project will not impair the intended purpose of Gaviota State Park which includes protecting its natural, cultural, and recreational resources.

If you have any questions, please do not hesitate to contact me at 805-585-1844.

Sincerely,

Tyson Butzke
Superintendent II
Channel Coast District

Appendix B 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
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

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."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

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 C Species Lists

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:
Consultation Code: 08EVEN00-2016-SLI-0186
Event Code: 08EVEN00-2019-E-00414
Project Name: Gaviota Culvert Repair

January 29, 2019

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.

[*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

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

Project Summary

Consultation Code: 08EVEN00-2016-SLI-0186

Event Code: 08EVEN00-2019-E-00414

Project Name: Gaviota Culvert Repair

Project Type: TRANSPORTATION

Project Description: The project proposes to replace the existing combination 6-foot x 6-foot reinforced concrete box (RCB) / 6-foot diameter reinforced concrete pipe (RCP) by jacking a new 6-foot diameter RCP adjacent to the existing culvert. The existing culvert would be and abandoned.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.47331806395344N120.21879612480822W

Counties: Santa Barbara, CA

Endangered Species Act Species

There is a total of 12 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 Fisheries[1], 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
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo *Vireo bellii pusillus* 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
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* 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
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* 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

Fishes

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* 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 *Rorippa gambellii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
Gaviota Tarplant *Deinandra increscens ssp. villosa* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4218	Endangered
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
Salt Marsh Bird's-beak *Cordylanthus maritimus ssp. maritimus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6447	Endangered

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Gaviota Tarplant *Deinandra increscens ssp. villosa* https://ecos.fws.gov/ecp/species/4218#crithab	Final

Appendix D Avoidance, Minimization and/or Mitigation Summary

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable.

The following is a summary of Avoidance, Minimization, and Mitigation measures. For detailed information on these measures, please refer to **Sections 2.2.1**, **2.2.2**, and **2.2.3**.

Note: Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

Reference Number	**Requirement**	**Responsible Party**	**Action to Comply**
NC-1	Install ESA fencing along maximum disturbance limits	-Design -Landscape	-Include SSPs in Contract and delineate on project plants -Install fencing -Maintain fencing
NC-2 NC-3	Minimize spread of invasive and invasive exotic species	-Design -RE -Landscape	-Wash trucks prior to leaving or entering the worksite -Use weed-free mulch.
NC-4	Import clean fill. Avoid spread of and remove invasive plants.	-Design -RE -Landscape	-Properly dispose of invasive plants and weedy export fill -Implement
NC-5	Certify construction equipment as weed-free prior to entering site	-RE -Project Biologist	-Establish wash stations for construction equipment
NC-6	Replace Coastal Scrub habitat at a ratio of 1:1 for temporary impacts	-Landscape -Project Biologist -RE	-Include in project plans and specifications -Implement

Reference Number	Requirement	Responsible Party	Action to Comply
NC-7	Replace Coastal Scrub habitat at a ratio of 2:1 for permanent impacts	-Landscape -Project Biologist -RE	-Include in project plans and specifications -Implement
W-1	Install ESA fencing	-Landscape Architect -RE	-Include specification in project plans -Implement
W-2	Work in-stream shall be conducted during the dry season.	-Design -Project Biologist -RE	-Include specification in project plans -Implement
W-3	Implement erosion control measures. Protect waters from equipment spills or leaks.	-Design -RE	-Include in contract -Implement
W-4	Avoid discharge of hazardous materials in waters.	-Design -Hazardous Waste Coordinator -RE	-Include specifications in project plans. -Implement
W-5	Implement construction BMPs	-Design -RE	-Include in contract -Implement
W-6	Restore stream contours	-Design -RE	-Include in project plans and specifications -Implement
W-7	Replace jurisdictional areas at a ratio of 1:1 for temporary impacts	-Landscape -Biologist -RE	-Include in project plans and specifications -Implement
W-8	Replace jurisdictional areas permanently impacted at 3:1 ratio.	-Landscape -Biologist -RE	-Include in project plans and specifications -Implement
TES-1	Provide flagging to protect Gaviota tarplant Critical Habitat prior to ground disturbance.	-Project Biologist -RE	-Notify biologist no less than 2 weeks prior to start of construction. -Install flagging -Maintain flagging
TES-2	Conduct Gaviota tarplant identification training for construction personnel	-RE -Project Biologist	-Notify biologist prior to start of construction. -Schedule and conduct training.

Reference Number	Requirement	Responsible Party	Action to Comply
TES-3	Avoid spread of and remove invasive weeds.	-Design -RE	-Include in specifications -Wash trucks prior to leaving or entering worksite -Use weed-free mulch
TES-4	Approved biologist shall conduct annual preconstruction surveys for Gaviota tarplant.	-Project Biologist	-Conduct surveys during Gaviota tarplant blooming period
TES-5	Only approved personnel shall participate in handling and monitoring of CRLF	-RE -Project Biologist	-Ensure staff has approval from USFWS prior to construction.
TES-6	Written approval shall be obtained from USFS prior to ground disturbance.	-RE -Project Biologist	-Notify Project Biologist prior to ground disturbance. -Obtain approval.
TES-7	Approved biologist shall conduct pre-construction surveys.	-RE -Project Biologist	-Contact Project Biologist at least one week prior to breaking ground.
TES-8	Conduct CRLF training session for construction staff	-RE -Project Biologist	-Contact Project Biologist prior to construction -Conduct training
TES-9	Monitor all activities that may affect CRLF	-Project Biologist	-Ensure monitor is present
TES-10	Properly dispose of trash	-Design -RE	-Include SSP -Implement
TES-11	Protect aquatic habitat from contamination	-Design -RE	-Include SSP -Implement
TES-12	Restore habitat contours to natural configuration	-Design -Landscape -RE	-Include in plans and specifications. -Implement
TES-13	Limit area of disturbance to smallest possible footprint	-Design -Biologist -RE	-Include in plans and specifications -Implement

Reference Number	Requirement	Responsible Party	Action to Comply
TES-14	Schedule work during the dry season	-Biologist -RE	-Include in specifications -Implement
TES-15	Control sedimentation during and after construction.	-Design -Landscape -RE	-Include BMPs in contract -Plant natives -Implement
TES-16	Protect CRLF during dewatering	-Design -RE	-Include in specifications -Implement
TES-17	Do not impound water without permission	-Design -RE	-Include in specifications -Implement and enforce
TES-18	Remove invasive animal species	-Project Biologist	-Implement
TES-19	Follow Declining Amphibian Task Force code of practices	-Project Biologist	-Implement
TES-20	Revegetate using suitable native vegetation	-Project Biologist -Landscape	-Ensure proper identification of planting pallet -Include in SSPs
TES-21	Limit use of herbicides	-Landscape -Project Biologist -RE	-Include in SSPs -Comply with requirements IF use is necessary -Enforce
TES-22	Conduct pre-construction survey for American badger	-RE -Project Biologist	-Notify biologist no less than 4 weeks prior to ground breaking -Conduct survey
TES-23	Submit pre-construction survey results	-Project Biologist	-Submit results to CDFW within 5 days of survey
TES-24	Conduct American badger training for construction personnel	-RE -Project Biologist	-Contact biologist prior to construction -Conduct training

Reference Number	Requirement	Responsible Party	Action to Comply
TES-25	Follow vehicle use guidelines	-RE	-Provide employees with vehicle use guidelines -Enforce
TES-26	Avoid harm to American badger	-RE -Project Biologist	-Institute litter control program -Prohibit pets and firearms on site. -Enforce
TES-27	Avoid trapping American badger	-RE -Project Biologist	-Cover, fill, or provide escape ramps for excavations deeper than 2 feet
TES-28	RE or designee as point of contact	-RE	-Implement
TES-29	Properly store concrete waste	-RE	-Include in contract -Implement
TES-30	Revegetate using suitable native vegetation	-Project Biologist -Landscape	-Follow restoration protocols -Ensure proper identification of planting palette -Include in project plans
TES-31	Install protective fencing	-RE -Design	-Include in project plans -Install fencing -Maintain fencing
TES-32	Conduct pre-construction survey for San Diego woodrats	-RE -Project Biologist	-Notify biologist prior to ground breaking
TES-33	Establish woodrat ESA, if necessary	-RE -Project Biologist	-Implement
TES-34	Avoid noise impacts to San Diego woodrats during breeding season, if necessary	-RE -Project Biologist	-Implement
TES-35	Dismantle woodrat nests by hand during non-breeding season, if necessary	-Project Biologist	-Implement

Reference Number	Requirement	Responsible Party	Action to Comply
TES-36	Avoid dismantling woodrat nests when young are present, if necessary	-Project Biologist	-Implement
TES-37	Conduct Coast Range newt, western pond turtle, and two-striped garter snake identification training for construction personnel	-RE -Project Biologist	-Notify biologist prior to start of construction -Schedule and conduct training
TES-38	Conduct preconstruction survey for Coast Range newt, western pond turtle, and two-striped garter snake	-RE -Project Biologist	-Notify biologist prior to start of construction
TES-39	Protect aquatic species during dewatering	-RE -Design	-Include specification in project plans -Implement -Check pumps daily
TES-40	Vegetation removal shall occur outside of nesting season	-RE -Project Biologist	-Include specification in project plans -Implement
TES-41	Protect active migratory bird nests	-RE -Project Biologist	-Include in project specifications -Establish and fence exclusion zones
TES-42	Protect trees within project limits	-RE -Design -Project Biologist	-Include tree removal in project plans -Install ESA fencing around remaining trees
TES-43	Monitor & document clearing and grubbing	-RE -Project Biologist	-Ensure monitor is present -Document observations
TES-44	Conduct roosting bat survey	-RE -Project Biologist	-Notify biologist 3 weeks prior to construction
TES-45	Conduct bat survey prior to tree removal, protect roosting bats	-RE -Project Biologist	-Notify biologist 1 week prior to tree removal -install protective fencing, if necessary

Reference Number	Requirement	Responsible Party	Action to Comply
GHG-1	Maintain construction equipment	-Design -RE	-Include in SSPs -Enforce
GHG-2	Revegetate disturbed soils	-Landscape -RE	-Include in Plans and Specification -Implement
GHG-3	Comply with air quality rules, regulations, and ordinances	-Design -RE	-Include in SSPs -Enforce

Appendix E Biological Opinion

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN00-2018-F-0839

February 15, 2019

Paul Andreano, Associate Biologist/Environmental Planner
California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401

Subject: Biological Opinion on the Gaviota Culvert Replacement Project (EA: 05-0K330)

Dear Mr. Andreano:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed Gaviota Culvert Replacement Project and its effects on the federally threatened California red-legged frog (*Rana draytonii*), endangered Gaviota tarplant (*Deinandra increscens* ssp. *villosa*), and designated critical habitat of the Gaviota tarplant, in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). We received your September 4, 2018, request for formal consultation on September 10, 2018.

We have based this biological opinion on information that accompanied your September 4, 2018, request for consultation, including the biological assessment (Caltrans 2018), and in correspondence with you (P. Andreano, California Department of Transportation, in litt. 2018). These documents, and others relating to the consultation, are located at the Ventura Fish and Wildlife Office.

California red-legged frog

Under the administration of the Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program (8-8-10-F-58) (PBO) (Service 2011), you are required to notify us of project activities that may adversely affect the California red-legged frog. The California Department of Transportation (Caltrans) has assumed the Federal Highway Administration's (FHWA) responsibilities under the Act for this action in accordance with Section 1313, Surface Transportation Project Delivery Program, of the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012, as described in the National Environmental Policy Act assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012) and codified in 23 U.S.C. 327. You have determined that the proposed culvert project may affect, and is likely to adversely affect the California red-legged frog and requested that such effects be addressed via the PBO. This project is not located

within designated critical habitat for the species. Caltrans will implement all minimization measures described on pages 7 through 12 of the PBO.

The proposed project, as described in the biological assessment (Caltrans 2018), satisfies the four criteria outlined in the PBO for projects that are likely to result in adverse effects to the California red-legged frog, but would not affect the long-term viability of the population in the action area. The effects of projects of this nature have been analyzed in the PBO under the Effects of the Action section (pages 29-34). Accordingly, we have determined that the Gaviota Culvert Replacement project is consistent with and appropriate for inclusion under the PBO. Caltrans must implement all avoidance and minimization measures, reasonable and prudent measures, and terms and conditions of the PBO.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Caltrans proposes to replace a failing existing culvert on State Route 101 in Santa Barbara County at post mile 45.5 near Gaviota State Park. Caltrans would install a new culvert using pipe-jacking methodology because of the rugged terrain in the area and to avoid disrupting automobile traffic on State Route 101. Pipe-jacking would require excavation of jacking and receiving pits to the north and south of State Route 101 and installation of hydraulic ram equipment within the thrusting pit. Caltrans would then use the hydraulic ram equipment to ram pre-fabricated concrete culvert sections equipped with a boring head horizontally towards the receiving pit. Following installation of the culvert sections, Caltrans would install new headwalls, wing walls, and rock slope protection at the culvert inlet and outlet. Caltrans would also install a new drainage inlet connected through a pipe riser to the new culvert on the shoulder of the northbound median of State Route 101. Caltrans would abandon the existing culvert in-place, remove the existing drainage inlet, and seal-off and abandon-in-place the existing pipe riser. Caltrans proposes to conduct construction over 95 dry-season work days beginning in April 2020 and ending in December 2021. Caltrans anticipates that the project may impact up to 19.2 acres including the proposed culvert replacement location, access roads, jacking and receiving pits, and staging areas.

To avoid and minimize impacts to the Gaviota tarplant and its critical habitat, Caltrans would implement the avoidance and minimization measures (Caltrans 2018):

1. Caltrans will clean up all project-related hazardous materials spills within the project site immediately. Caltrans will keep readily accessible spill prevention and cleanup materials on-site at all times during construction.

2. Caltrans will implement erosion control measures during construction. Caltrans will install silt fencing, fiber rolls, and/or barriers as needed between the project site and jurisdiction other waters and riparian habitat. Caltrans will maintain erosion controls on a daily basis, at minimum, throughout the construction period.

3. Caltrans will clean and refuel equipment and vehicles only within a designated staging area. Caltrans will locate designated staging areas a minimum of 100 feet from aquatic areas or surround the area with barriers. Caltrans will implement Best Management Practices with the goal of attaining zero discharge of stormwater runoff. Caltrans will check and maintain all equipment and vehicles on a daily basis to ensure proper operation and avoid potential leaks or spills.

4. Caltrans will delineate environmentally sensitive areas that restrict access to the minimum required for construction and prohibit vehicle access.

5. Caltrans will use a Service-approved botanist to oversee flagging of the perimeter of all approved work areas in Gaviota tarplant critical habitat prior to ground disturbance.

6. Caltrans will use a Service-approved biologist to conduct a training session for all construction personnel. The training will include a description of the Gaviota tarplant and its habitat, the location of critical habitat within the project area, the measures implemented by Caltrans to conserve Gaviota tarplant, and the boundaries of project disturbance.

7. Caltrans will ensure that vehicles and equipment will be free of dirt, mud, or vegetation that may contain non-native weed species. Caltrans will remove non-native weed species when possible to do so. Caltrans will avoid the spread or introduction of invasive exotic plant species to the maximum extent possible. Caltrans will import only clean fill to the project site. If necessary, Caltrans will establish onsite wash stations to avoid or minimize the spread of invasive plants within the project area.

8. Caltrans will conduct preconstruction surveys within the project area during the Gaviota tarplant blooming period in the year prior to construction.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY AND ADVERSE MODIFICATION DETERMINATIONS

Jeopardy Determination

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

The jeopardy analysis in this biological opinion relies on four components: (1) the Status of the Species, which describes the range-wide condition of the Gaviota tarplant, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which

analyzes the condition of the Gaviota tarplant in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the Gaviota tarplant; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the Gaviota tarplant; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the Gaviota tarplant.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the Gaviota tarplant, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the Gaviota tarplant in the wild by reducing the reproduction, numbers, and distribution of that species.

Adverse Modification Determination

Section 7(a)(2) of the Act requires that Federal agencies insure that any action they authorize, fund, or carry out is not likely to destroy or to adversely modify designated critical habitat. A final rule revising the regulatory definition of "destruction or adverse modification" was published on February 11, 2016 (81 FR 7214). The final rule became effective on March 14, 2016. The revised definition states:

> "Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features."

The "destruction or adverse modification" analysis in this biological opinion relies on four components: (1) the Status of Critical Habitat, which describes the range-wide condition of the critical habitat in terms of the key components (i.e., essential habitat features, primary constituent elements, or physical and biological features) that provide for the conservation of the listed species, the factors responsible for that condition, and the intended value of the critical habitat overall for the conservation/recovery of the listed species; (2) the Environmental Baseline, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the value of the critical habitat in the action area for the conservation/recovery of the listed species; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the key components of critical habitat that provide for the conservation of the listed species, and how those impacts are likely to influence the conservation value of the affected critical habitat; and (4) Cumulative Effects, which evaluate the effects of future non-Federal activities that are reasonably certain to occur in the action area on the key components of critical habitat that provide for the conservation of the listed species and how those impacts are likely to influence the conservation value of the affected critical habitat.

For purposes of making the "destruction or adverse modification" determination, the Service evaluates if the effects of the proposed Federal action, taken together with cumulative effects, are likely to impair or preclude the capacity of critical habitat in the action area to serve its intended conservation function to an extent that appreciably diminishes the rangewide value of critical habitat for the conservation of the listed species. The key to making that finding is understanding the value (i.e., the role) of the critical habitat in the action area for the conservation/recovery of the listed species based on the Environmental Baseline analysis.

STATUS OF THE SPECIES AND ITS CRITICAL HABITAT

Gaviota tarplant was federally listed as endangered on March 20, 2000 (65 FR 14888). We designated critical habitat for Gaviota tarplant on November 7, 2002 (Service 2002). The subspecies is also listed by the State of California as endangered.

Gaviota tarplant germinates in response to substantial rainfall. Seedlings have been observed as early as January (URS 1988). Plants grow through the spring and peak flowering ranges from late May to late July, depending on climatic conditions. By late summer or fall, most plants have died although a few continue to flower and produce seed (All American Pipeline Company (AAPC) 1992). Nearly all plants generally die by mid-October, but some can survive and flower until January.

Gaviota tarplant is associated with grasslands comprised of native needlegrass (*Nassella* spp.), nonnative wild oats (*Avena* spp.), ripgut brome (*Bromus diandrus*), and other herbs and grasses. The grasslands intergrade with coastal sage scrub composed of California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), sawtooth golden bush (*Hazardia squarrosa*), and California buckwheat (*Eriogonum fasciculatum*) (Service 2011, CNDDB 2018). Gaviota tarplant is found on sandy soils associated with marine terraces and uplifted marine sediments and ranges in elevation from 40 feet along the lowest terraces to 1,500 feet (Hendrickson et al.1998, CNDDB 2018, Wilken 1998, Service 2011, University of California Riverside Herbarium 2013). At the higher elevations (above 700 feet), the taxon occurs in grasslands (CNDDB 2018, Wilken 1998).

As is typical of annual plant species, the number of individuals present aboveground from one year to the next varies dramatically and most likely depends on climatic conditions such as amount and timing of rainfall, and temperature regimes during critical stages of germination and seedling growth. In some years, patches may contain few to no individuals, but a seed bank likely persists in the soil (Howald 1989).

Threats to Gaviota tarplant include destruction of individual plants, habitat loss and degradation from the development and decommissioning of oil and gas facilities and pipelines, incompatible fire management practices, residential and commercial development, and competition with nonnative weeds (Service 2000). Within the last few years, several aggressive nonnative plants,

veldt grass (*Ehrharta calycina*), harding grass (*Phalaris aquaticus*), and *Eucalyptus* spp. have invaded the Gaviota coast and pose a serious threat to Gaviota tarplant and the remaining coastal prairie habitat (Meyer, pers. comm. 2001; Service 2011).

Generally, Gaviota tarplant appears to have few predators. Grazing and browsing animals such as horses, cattle, and deer avoid the strong smelling, resinous plants when feeding. Some predation on immature fruit (usually disk achenes) by small black flower beetles has been noted in wild populations (AAPC 1995).

The presence of Gaviota tarplant has been observed to have a positive correlation to some types of soil disturbance, which may increase seed coat permeability through abrasion. Light disturbance during the dry season such as occasional foot, livestock, or vehicular traffic is thought to enhance tarplant growth. Its presence along footpaths, livestock trails, and roadsides is thought to demonstrate this species' correlation with disturbance (URS 1988; AAPC 1990). More intense disturbance, however, such as excavation of the soil profile, may temporarily enhance germination but is more likely to stimulate growth of competitive nonnative species. Disturbance when the soil is wet is likely to kill tarplant seeds as well as young seedlings (AAPC 1995).

At the time the taxon was first described in 1982, Gaviota tarplant was known only from marine terraces in the immediate vicinity of Gaviota with plants only known to occur up to several kilometers in either direction along the immediate coast (Tanowitz 1982). Then between 2000 and 2002, Gaviota tarplant was reported at several new locations ranging westward from Gaviota along the coast, in the Santa Ynez Mountains, and at Point Arguello (CNDDB 2018). After Gaviota tarplant was reported from these new locations, it was then considered to occur along the coast west to Point Conception and north along the coast to Point Sal, as well as in two areas in the mountains of the western Transverse Ranges: in the Santa Ynez Mountains and the Tranquillion Mountain/Sudden Peak areas. Currently, it is recognized as having a highly localized distribution in western Santa Barbara County, California with seven main populations: Lion's Head (near Point Sal), Point Arguello, Tranquillion Mountain/Sudden Peak, Point Conception, Hollister Ranch, Santa Ynez Mountains, and Gaviota (CCH 2013; CNDDB 2018; Baldwin 2007, 2009, 2012; Elvin, in litt. 2007, 2010a, 2010b; Service 2011). Populations may also occur in undocumented locations.

We have not developed a recovery plan for Gaviota tarplant to which we can refer to assess its recovery status. In the absence of a recovery plan, we default to the general conservation of the species. For a species like Gaviota tarplant that has threats throughout its range, recovery would necessitate the conservation of much of the remaining habitat that supports the species. In addition, conducting actions to reduce or remove threats to the species and restoration of suitable habitat that has been disturbed but otherwise remains undeveloped would be a priority. Lastly, efforts to establish the species in unoccupied but otherwise suitable habitat would contribute to its recovery.

Critical Habitat for Gaviota Tarplant

A final rule published on February 11, 2016 (81 FR 7414), removed the phrase "primary constituent elements" (PCEs) from the regulations for designating critical habitat (50 CFR 424.12). Instead, new designations will focus on "physical and biological features" (PBFs). Existing critical habitat rules may still define PCEs; however, the two terms (PBFs and PCEs) may be used interchangeably as they are considered synonymous. In cases where an existing critical habitat rule numbers PCEs specifically (e.g., PCE-1, PCE #1), we will use the terms as defined in the existing critical habitat designation to avoid confusion.

We designated approximately 9,709 acres as critical habitat for Gaviota tarplant on November 7, 2002 (67 FR 67968). The areas designated as critical habitat are in three units, located in the Santa Ynez Mountains and along the Gaviota Coast, and include the appropriate soils and associated grassland and coastal sage scrub plant communities that support Gaviota tarplant. All of the critical habitat units are occupied by the subspecies as well as intervening suitable habitat that provides space for population expansion, formation of new colonies, and shifts in population location which may occur over decades as habitat suitability changes due to geomorphic or other events (e.g., slope failure, wildfire). In addition, the three units contain habitat needed to support the ecological associates (e.g., pollinators, seed dispersal agents, mycorhizzal fungi) that maintain extant populations of Gaviota tarplant, and the primary constituent elements of its critical habitat.

The PBFs of critical habitat for Gaviota tarplant are:

1. Sandy soils associated with coastal terraces adjacent to the coast or uplifted marine sediments at interior sites up to 3.5 miles inland from the coast; and

2. Plant communities that support associated species, including needlegrass grassland and coastal sage scrub communities, particularly where the following associated species are found: needlegrass species, California sagebrush, coyote bush, sawtooth golden bush, and California buckwheat.

ENVIRONMENTAL BASELINE

Action Area

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). The action area for this biological opinion is the 19.2-acre action area identified in the project's biological assessment (Caltrans 2018).

Habitat Characteristics of the Action Area

The action area contains a seasonal, intermittently flowing creek (Canada del Barro) bordered with riparian vegetation such as arroyo willows (*Salix lasiolepis*). Upland areas of the action area contain central coast scrub vegetation such as California sagebrush (*Artemisia californica*) and coyote brush (*Baccharis pilularis*). Areas within the action area near State Route 101 are comprised of ruderal habitat containing species such as brome grasses (*Bromus* spp.) and black mustard (*Brassica nigra*).

Existing Conditions in the Action Area

The action area is highly disturbed in general and defined by the presence of State Route 101 and its bridge over Canada del Barro within the action area. Underneath this bridge, the creek contains an existing concrete culvert to conduct downstream flows underneath State Route 101.

Previous Consultations in the Action Area

The Service has previously consulted on the effects of a pipeline repair (2015-F-0037; Service 2015a) and roadside safety improvements (2015-F-0137; Service 2015b) on designated critical habitat of the Gaviota tarplant and concluded that neither of these projects would cause adverse modification of critical habitat. The Service has also previously consulted on the effects of a realignment of State Route 101 on the Gaviota tarplant and its critical habitat (2013-F-0174; Service 2013) and concluded that the project would not jeopardize the continued existence of the species nor adverse modification of its critical habitat.

Condition (Status) of the Species in the Action Area

The action area contains needlegrass grasslands and coastal sage scrub habitats associated with the Gaviota tarplant. The nearest records of the species are within 0.06 mile to the east of the action area and 0.07 mile to the southwest of the action area. Caltrans conducted eight botanical surveys of the project site in 2017 throughout the entire blooming period of the species and did not observe the species, despite the presence of the species at a reference site 1.08 miles to the east (P. Andreano, Caltrans, in litt. 2018). Nevertheless, the species can persist in the seedbank without aboveground individuals and the action area contains suitable habitat for the species. Thus, the species may still be present within the project area.

Recovery

We have not developed a recovery plan for Gaviota tarplant to which we can refer to assess its recovery status. In the absence of a recovery plan, we default to the general conservation of the species. For a species like Gaviota tarplant that has threats throughout its range, recovery would necessitate the conservation of much of the remaining habitat that supports the species. In addition, conducting actions to reduce or remove threats to the species and restoration of suitable

habitat that has been disturbed but otherwise remains undeveloped would be a priority. Lastly, efforts to establish the species in unoccupied but otherwise suitable habitat would contribute to its recovery.

Condition (Status) of Critical Habitat in the Action Area

The entire action area is within the 7,848.78-acre Conception-Gaviota critical habitat unit (67 FR 67968). The Service designated the Conception-Gaviota unit because the unit contains most of the known populations of Gaviota tarplant. Both PBFs of critical habitat for the species are present within the action area and nearby as well.

EFFECTS OF THE ACTION

Gaviota tarplant

The proposed project may adversely affect the Gaviota tarplant by trampling, crushing, or removal of seeds or aboveground plants in the action area by personnel, vehicles, or equipment during project activities. Caltrans proposes to avoid and minimize these effects by implementing avoidance and minimization measures 4, 5, 6, and 8. We conclude that the proposed measures would be effective at avoiding and minimizing these effects on the Gaviota tarplant because the species is not currently known to occur in the project area and Caltrans would implement suitable avoidance and minimization measures.

The proposed project may adversely affect the Gaviota tarplant by degrading habitat quality in the action area by creating erosion or sedimentation, introducing chemical contaminants such as fuels, or introducing non-native weed species to the action area. Caltrans proposes to avoid or minimize these effects by implementing avoidance and minimization measures 1, 2, 3, 4, 6, and 7. We conclude that the proposed measures would be effective at avoiding and minimizing these effects on the Gaviota tarplant because the species is not currently known to occur in the project area and Caltrans would implement suitable avoidance and minimization measures.

Critical Habitat of the Gaviota tarplant

The proposed project would temporarily disturb 19.2 acres of critical habitat within the Conception-Gaviota critical habitat unit. Of these 19.2 acres, 2.52 acres contain PBFs 1 and 2 of designated critical habitat for the species. Additionally, the project would permanently disturb 0.6 acre of critical habitat containing PBFs 1 and 2 of designated critical habitat of the species (Caltrans 2018).

The proposed project may adversely affect designated critical habitat of the Gaviota tarplant by degrading habitat quality in the action area by creating erosion or sedimentation, introducing chemical contaminants such as fuels, or introducing non-native weed species to the action area. Caltrans proposes to avoid or minimize these effects by implementing avoidance and minimization measures 1, 2, 3, 4, 6, and 7. We conclude that the proposed measures would be

effective at avoiding and minimizing these effects on designated critical habitat of the Gaviota tarplant because the affected area is relatively small, the PBFs of designated critical habitat would remain available nearby, and Caltrans would implement suitable avoidance and minimization measures.

Effects on Recovery

We have not developed a recovery plan for the Gaviota tarplant to which we can refer to assess its recovery status. In the absence of a recovery plan, we default to standard conservation practices for this and most other species. For a species like the Gaviota tarplant with a restricted distribution, recovery would focus on the preservation of much of the remaining habitat that supports the species. In general terms, where suitable habitat exists, it should be conserved and where possible, additional habitat should be created or restored.

The proposed project would not appreciably reduce the likelihood of recovery for the Gaviota tarplant because the species is not known to occur in the action area and the proposed project would affect a relatively small portion of suitable habitat for the species in the area.

Summary of Effects

Effects of the proposed project on the Gaviota tarplant would likely be low because the species is not known to occur in the action area, the affected area is relatively small, and Caltrans will implement suitable avoidance and minimization measures.

Effects of the proposed project on designated critical habitat of the Gaviota tarplant would likely be low because the affected area is relatively small, the PBFs of critical habitat would remain available nearby, and Caltrans will implement suitable avoidance and minimization measures.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. We do not consider future Federal actions that are unrelated to the proposed action in this section because they require separate consultation pursuant to section 7 of the Act. The Service is unaware of any future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion.

CONCLUSION

Gaviota tarplant

The regulatory definition of "to jeopardize the continued existence of the species" focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological

opinion. For that reason, we have used those aspects of the Gaviota tarplant's status as the basis to assess the overall effect of the proposed action on the species.

Reproduction

The proposed project is unlikely to appreciably reduce the reproductive capacity of the Gaviota tarplant because the species is not known to occur in the action area and any reduction in the reproductive capacity of the Gaviota tarplant would likely be compensated for during the next reproductive cycle.

Numbers

The proposed project is unlikely to appreciably reduce the numbers of the Gaviota tarplant because the species is not known to occur in the action area and any reduction in the numbers of the Gaviota tarplant would likely be compensated for during the next reproductive cycle.

Distribution

The proposed project would not appreciably reduce the distribution of the Gaviota tarplant because the species is not known to occur in the action area.

Recovery

The proposed project would not appreciably reduce the likelihood of recovery by the Gaviota tarplant because the species is not known to occur in the action area and the project would affect only a small amount of suitable habitat for the species in the area.

After reviewing the current status of Gaviota tarplant, the environmental baseline for the action area, the effects of the proposed project and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the Gaviota tarplant because the effects on reproduction, numbers, distribution, and recovery are negligible.

Critical habitat of the Gaviota tarplant

The proposed project would temporarily disturb 2.52 acres (0.03 percent) and permanently disturb 0.6 acre (0.008 percent) of the 7848.78-acre Conception-Gaviota critical habitat unit. The action area and the Conception-Gaviota critical habitat unit would continue to contain PBFs 1 and 2 following project implementation. The proposed project would not appreciably reduce the conservation value or function of the Conception-Gaviota critical habitat unit.

After reviewing the current status of the critical habitat of Gaviota tarplant, the environmental baseline of critical habitat for the action area, the effects of the proposed project on critical habitat, and the cumulative effects, it is the Service's biological opinion that the project, as

proposed, is not likely to result in the destruction or adverse modification of critical habitat of the Gaviota tarplant because:

1. The project would not appreciably reduce the availability of PBFs 1 and 2 in the Conception-Gaviota critical habitat unit; and

2. The Conception-Gaviota critical habitat unit would retain its conservation value and function.

INCIDENTAL TAKE STATEMENT

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species; however, limited protection of listed plants is provided at section 9(a)(2) to the extent that the Act prohibits the removal and reduction to possession of federally listed plants from areas under Federal jurisdiction, the malicious damage or destruction of such plants on areas under Federal jurisdiction, and the destruction of listed plants on non-Federal areas in violation of State law or regulation or in the course of a violation of a State criminal trespass law.

CONSERVATION RECOMMENDATIONS

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

We recommend Caltrans coordinate with us to develop a regional conservation plan for the Gaviota tarplant.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in your request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions about this biological opinion, please contact Dou-Shuan Yang of my staff at 805-677-3302, or by e-mail at Dou-Shuan_Yang@fws.gov.

Sincerely,

Stephen P. Henry
Field Supervisor

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Cultural Resources Review Memorandum (December 2017)

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Initial Paleontology Study (November 2017)

Preliminary Geotechnical Report Memorandum (January 2004)