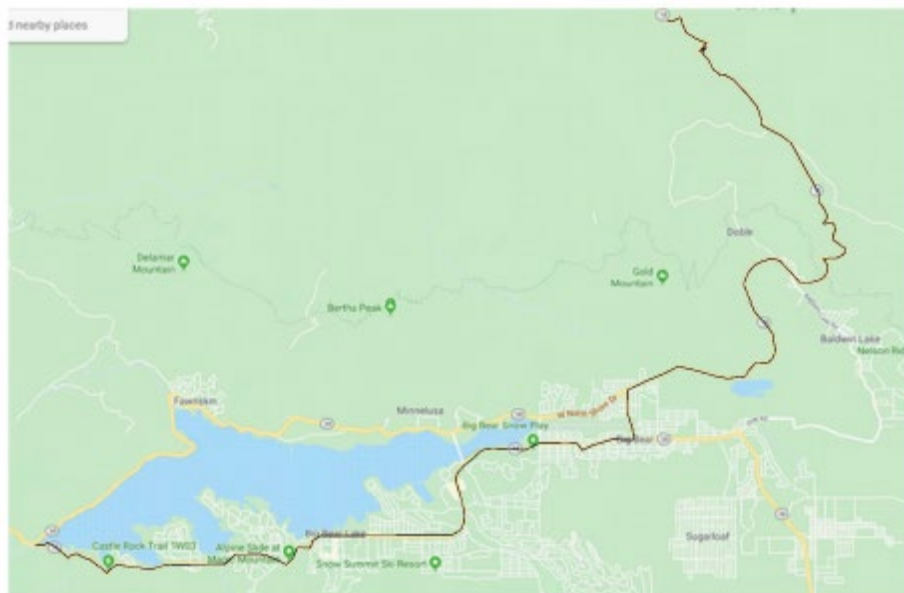


State Route 18 Culvert Replacements

SAN BERNARDINO COUNTY, CALIFORNIA
DISTRICT 8 – SBD – 18 (PM 44.3/68.0)
0G690/0812000110

Initial Study with Proposed Mitigated Negative Declaration



Prepared by the
State of California, Department of Transportation



June 2020

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in San Bernardino County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, what alternatives we have 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.

What you should do:

Please read this document.

We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline below.

Send comments via postal mail to:

Department of Transportation, Caltrans District 8
Shawn Oriaz, Senior Environmental Planner
464 West 4th Street, MS 827
San Bernardino, CA 92401

Send comments via email to:

replace.sr18.culverts.d8@dot.ca.gov.

Be sure to send comments by the deadline: July 10, 2020.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Vivian Ho, Environmental Planning, 464 West 4th Street, MS 827, San Bernardino, CA 92401; (909) 381-1779 (Voice), or call the California Relay Service 1 (800) 735-2929 (TTY to voice), or 1 (800) 735-2922 (Voice to TTY) or 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

Replace deteriorating drainage systems along State Route 18, from Post Mile (PM) 44.3/68.5 in the City of Big Bear
and City of Big Bear Lake

INITIAL STUDY with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

6/15/2020
Date



David Bricker
Deputy District Director
District 8, Division of Environmental Planning
California Department of Transportation
CEQA Lead Agency

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (the Department) proposes to replace 31 culverts on State Route 18 between Big Bear Lake Dam and North of Cactus Road (PM 44.3 to 68.5) in the County of San Bernardino. The culverts are severely rusted and have reached the end of their design life.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an MND for this project. This does not mean that the Caltrans' decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

The Caltrans has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture and forest resources, air quality, energy, geology and soils, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, recreation, utilities and service systems, and wildfire.

In addition, the proposed project would have no significantly adverse effects on cultural resources, greenhouse gas emissions, public services, transportation, tribal cultural resources.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to biological resources, hazards and hazardous material, and aesthetics.

List mitigation measures.

HW-1: Culvert 19 classifies as type COM regulated soil and requires California Department of Toxic Substances Control notification.

VIS-1: Any removal of trees or shrubs shall be allocated replacement in kind with a minimum ratio of 3:1 to achieve massing comparable to previously existing. Upon further evaluation in Plans, Specifications and Estimates (PS&E) phase per District Landscape Architect (DLA), this ratio may be adjusted.

BIO-6: Project impacts to jurisdictional areas will be mitigated and coordinated with USACE, RWQCB, and CDFW during the permitting process. It is anticipated that a minimum 1:1 ratio will be applied to any permanent impacts of jurisdictional waters to be paid in the form of onsite restoration, in-lieu fee, mitigation bank credit, or land acquisition.

David Bricker
Deputy District Director
District 8, Division of Environmental Planning
California Department of Transportation
CEQA Lead Agency

Dater

Chapter 1 – Proposed Project

Introduction

The Department of Transportation (Caltrans) proposes to replace drainage systems on State Route 18 (SR-18) in the City of Big Bear and the City of Big Bear Lake, just east of Big Bear Lake Dam to just south of Arctic Canyon Wash. The total length of the project is 24.2 miles. Figures 1.1, 1.2, and 1.3 show the project locations and vicinity.

This project was initiated by Caltrans District 8 Division of Maintenance. The Program Advisor of the Drainage System Restoration Program recognized the need for a project on SR-18 that addressed the deterioration of culvert pipes.

This project is included in the 2019 Federal Transportation Improvement Program (FTIP) and is proposed for funding from the 2018/2019 State Highway Operation and Protection Program and Minor Program (SHOPP).

SBDLS02 Exempt Grouped Projects for Pavement Resurfacing and/or Pavement Rehabilitation SHOPP Roadway Preservation Program 2019 FTIP Amendment #19-08								
Agency	County	District EA	Notes	Project Description	Program Year (Federal FY)	Federal Funds	State Funds	Cost (in \$1000's)
Caltrans	SBd	0G690	New: SHOPP Amendment #18H-000 approved by CTC March 21-22, 2018.	On SR-18 near Big Bear and Lucerne Valley, at various locations, from Route 38 at Big Bear Lake Dam to Arctic Canyon Wash. Reline or replace culverts, SHOPP Amendment #18H-000 approved by CTC March 21-22, 2018 PA&ED and R/W Capital Funding Only and Resolution FP-17-47 authorized PA&ED \$1.192M.	2018/19	\$1,892	\$	\$1,892

Purpose and Need

Purpose:

The purpose of this project is to replace the identified deteriorating drainage systems and preserve the integrity of SR-18.

Need:

The existing culverts identified in this project by Maintenance Division have reached their design service life and are experiencing severe deterioration.

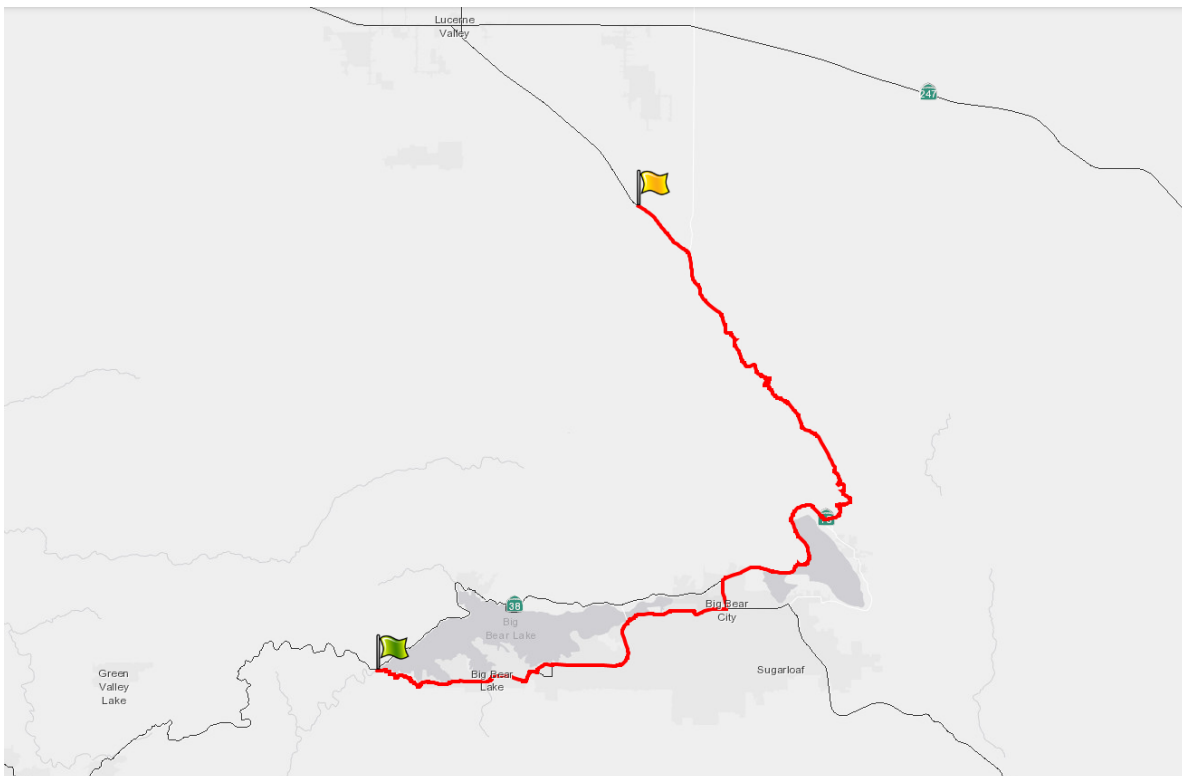
Field site visits conducted by the Design Division during planning and preliminary engineering confirmed the condition of the drainage systems as shown in Figure 1.4.



Examples of culvert conditions in the project scope. From left to right, Culvert #39 PM 53.95, and Culvert #15 PM 45.28.

Project Description

The proposed project is located in San Bernardino County on SR-18 from Big Bear Lake Dam at Postmile 44.3 to Arctic Canyon Wash at Postmile 68.0. Within this area, the Caltrans Route Concept Report produced June 17, 2017 identifies SR-18 as a two-lane conventional highway, which functions as the primary arterial connecting the City of Big Bear Lake, Big Bear City, and various other mountain communities. The exception is the four-lane section between PM 49.11/51.61 from Pine Knot Avenue through Stanfield Cutoff.



Project vicinity map showing project limits on SR-18 extending from Big Bear Lake towards Lucerne Valley.

The proposed project limits are discontinuous and consist of unique polygons surrounding the drainage systems identified as deteriorated. Each disturbed soil area (DSA) polygon extends roughly 25 feet from the sides of the culvert.

The original scope of work consisted of 41 culverts. The number of culverts was reduced to 31 as some of the culverts have been replaced in recent years due to emergency maintenance work or adjacent development. The proposed culverts to be replaced and their locations are summarized in the following table:

Drainage System	Postmiles	Diameter (in)	Length (ft)
2	45.12	18	35
3	45.22	18	45
4	45.28	18	16
5	45.59	18	40
6	45.71	18	25
8	45.85	18	55
9	46	18	40
10	46.26	24	45
11	46.31	12	45
12	46.4	18	95
13	46.76	12	41
14	46.76	12	41
15	47.3	18	65
16	47.3	18	17
17	47.67	18	45
24	51.69	12	42
25	52.41	12	60
26	52.78	12	46
27	52.88	12	40
28	53.61	12	40
29	53.81	16	30
31	53.95	18	130
33	59.73	18	40
34	59.81	24	90
35	59.91	24	80
36	60.09	24	25
37	60.49	18	45
38	60.91	30	65
39	63.06	18	60
40	63.08	18	45
41	63.14	18	36

Alternatives

PROJECT ALTERNATIVES

Project alternatives are proposed and evaluated based on how well they meet the purpose and need, their feasibility, and their impacts on the environment. The proposed project considered the “Replace Drainage Systems” alternative and the no-build alternative. No other build alternatives were identified that would have either fully satisfied the purpose and need or had any identifiable improvements to feasibility or to environmental impacts.

After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the project’s effect on the environment. Under the California Environmental Quality Act (CEQA), if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration (ND) or Mitigated ND.

Build Alternative: Replace Drainage Systems

The “Replace drainage systems” alternative proposes to excavate the 31 deteriorated culverts identified in the above table and where necessary, their associated drainage system elements. The proposed project will then replace the removed culvert pipe and drainage elements, backfill the excavated trenches, and replace the removed overlying pavement. Rock slope protection will be installed in proportion to the pipe diameter as recommended by the 2018 Caltrans Standard Plans and Specifications and will not extend further than the DSA polygon identified at each location. Work will take place in one direction at a time to allow traffic to pass.

Work will be carried out according to the 2018 Caltrans Standard Plans and Specifications for culvert replacement, which recommends excavating a sloped trench to the invert level. Typical trench detail will be provided at the Plans, Specifications, and Estimates (PS&E) phase. Original soils will be backfilled where feasible and permitted by the relevant hazardous waste regulations.

The project will require temporary construction easements on a total of 31 parcels in order to replace the culverts identified, and to do drainage work including rock slope protection. Each culvert will be excavated to the depth of the invert, with horizontal excavation impacts of 3 feet from the edges of the culvert on each side at the surface, sloping down to 2 feet from the edges of the culvert on each side at the invert level. The equipment required to perform the excavation will be contained within the provided DSA.

No-Build (No-Action) Alternative

The no-build alternative would leave the existing drainage systems as they are. Construction-related costs, traffic impacts, right-of-way easements, and impacts to the environment could be avoided in the short term. However, many drainage systems in the region have already been relined and are past their design service life. SR-18 is the main artery through Fawnskin, the City of Big Bear Lake, and Big Bear City; a full road closure for any reason would put undue strain on the community. If a deteriorated drainage system were to fail or wash out, construction to repair the drainage system and overlying road could close both directions of travel. In that case, the impacts to the community and the environment would be sustained at that time, and their magnitude would be equal to or worse than executing construction in one direction at a time.

Permits and Approvals Needed

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

Agency	PLAC	Status
United States Army Corps of Engineers	Section 404 Nationwide Permit for filling or dredging waters of the United States.	Target submittal in the PS&E phase after FED approval..
California Department of Fish and Wildlife	1600 Permit	Target submittal in the PS&E phase after FED approval.
California Water Resources Board	Water Discharge Permit (Section 401)	Application for Section 401 permit expected after FED approval.

Chapter 2 – CEQA Environmental Checklist

PROJECT DESCRIPTION AND BACKGROUND

Project Title:	State Route 18 Culvert Replacements
Lead agency name and address:	California Department of Transportation (Caltrans)
Contact person and phone number:	Shawn Oriaz (909) 388-7034
Project Location:	State Route 18, San Bernardino County
Project sponsor's name and address:	N/A
General plan description:	Transportation
Zoning:	Transportation
Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation.)	Replace 31 culverts along State Route 18
Surrounding land uses and setting; briefly describe the project's surroundings:	Primarily commercial (visitor, recreational, and general), multi-family residential, and public facilities adjacent to SR-18, with single family residential, industrial, public facilities, open space, industrial and rural residential within 0.5 miles of the project limits within the City limits.
Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):	California Regional Water Quality Control Board United State Army Corps of Engineers California Department of Fish and Wildlife
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	No

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 3 for additional information.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology/Soils	<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials
<input type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input checked="" type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: <i>Shawn Oriaz</i>	Date: 06/11/2020
Printed Name: Shawn Oriaz	

AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with...enjoyment of aesthetic, natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

CEQA Significance Determinations for Aesthetics

a) No Impact

The proposed project would not have a substantial adverse impact on a scenic vista because the project area does not include any scenic vistas. This area of SR-18 is listed as eligible for the California Scenic Highway system and is therefore a sensitive corridor for visual resources.

b) Less Than Significant Impact

Approximately 16 culverts may require tree removal. Each culvert has a maximum-potential of removing five trees, and most of these culverts will impact less than five trees. The removal of a few trees at each culvert location would be inconspicuous due to the natural random layout and random density of existing trees typical in the City of Big Bear Lake. Little impact is anticipated to visual resources for the 16 culverts that have the potential to remove trees.

Culvert #3 (PM 45.22) is unique because it will require removal of at least one large boulder and may potentially require removal of a few trees. In this area, the conditions along the edge of the route vary between vegetated slopes and boulders, making removal of this boulder

inconspicuous. Additionally, any trees to be removed are set back from the road, and several canopy openings along the corridor would make tree removal inconspicuous.

c) Less Than Significant Impact

The typical urban area culverts and rural area culverts with no tree removals would have no impact to visual resources.

Due to the sparse distribution of trees in the rural corridor, the removal of a tree would not change the nature of the scenery and would have very little impact to visual resources

The typical urban area culverts with potential tree removals would have little impact to visual resources. The random layout and density of the trees in the visual scene allow the removal of a tree to go relatively unnoticed by travelers.

a) No Impact

The proposed project will not create any new source of light glare.

Avoidance, Minimization, and/or Mitigation Measures

VIS-1: Any removal of trees or shrubs shall be allocated replacement in kind with a minimum ratio of 3:1 to achieve massing comparable to previously existing. Upon further evaluation in Plans, Specifications and Estimates (PS&E) phase per District Landscape Architect (DLA), this ratio may be adjusted.

VIS-2: Any removed trees shall be replanted at a suitable location away from the Traveled Way and away from Disturbed Soil Area (DSA) of culvert replacement. This mitigation measure will support long-term natural reforestation of the area.

VIS-3: Provide erosion control for all DSA areas or provide erosion control method as adjusted per water board guidelines.

VIS-4: Minimize tree removal, especially for larger trees.

VIS-5: Offset moderate/major impacts to resident(s) affected by project work. This could mean additional cut and fill, small retaining walls, and/or a relocated culvert line.

VIS-6: Remove all invasive plant species found in project limits.

AGRICULTURE AND FOREST RESOURCES

<p>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.</p>				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

The proposed project would not convert any Farmland to non-agriculture use.

b) No Impact

The proposed project would not conflict with any existing zoning for agriculture use or a Williamson Act Contract.

c) No Impact

The proposed project may require 3 temporary construction easements (TCEs) on USFS lands. The use is temporary and will not conflict with existing zoning of forest land.

d) No Impact

The proposed project may require 3 temporary construction easements (TCEs) on USFS lands. The use is temporary and will not convert forest land to non-forest use.

e) No Impact

The proposed project does not anticipate other changes in the environment that could result in the conversion of Farmland or non-agricultural use or conversion of forest land to non-forest use.

Avoidance, Minimization, and/or Mitigation Measures

None

AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5})—and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP)

for attaining the NAAQS. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), sulfur dioxide (SO₂). California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope that has not changed significantly from

those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts

CEQA Significance Determinations for Air Quality

a) No Impact

The proposed project would not conflict with or obstruct implementation of the applicable air quality plan

b) No Impact

The proposed project would not 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

c) No Impact

The proposed project would not expose sensitive receptors to substantial pollutant concentrations.

d) No Impact

The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Avoidance, Minimization, and/or Mitigation Measures

None

BIOLOGICAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Natural Communities

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

Wetlands and Other Waters

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 CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. 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, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

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

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

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

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, 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 Alternative 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 CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

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

Plant Species

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section in this document for detailed information about these species. The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Animal Species

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

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)

- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

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

Threatened and Endangered Species

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 U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 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." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

CEQA Significance Determinations for Biological Resources

a) Less Than Significant with Mitigation Incorporated

Avoidance, Minimization, and/or Mitigation Measures

Caltrans Standard BMPs, the BMPs in the SWPPP, and 2018 Standard Specifications (or latest version) will be implemented to minimize effects during construction. Proposed project impacts to jurisdictional areas will be mitigated and coordinated with USACE, RWQCB, and CDFW during the permitting process. It is anticipated that a minimum 1:1 ratio will be applied to any

permanent impacts of jurisdictional waters to be paid in the form of onsite restoration, in-lieu fee, mitigation bank credit, or land acquisition.

Caltrans has determined that the proposed project will have no take of California Department of Fish and Wildlife (CDFW) listed state species. Rare species listed by the California Native Plant Society will not be affected with the implementation of avoidance and minimization measures.

The proposed project would have minimal indirect impacts to sensitive, special status, or candidate plant species through habitat conversion by the introduction of invasive species. These impacts would be minimized during construction through the implementation of Caltrans Standard Best Management Practices (BMPs), the BMPs in the Stormwater Pollution Prevention Plan (SWPPP), and the 2018 Standard Specifications (or latest version).

The proposed project would have temporary and permanent indirect impacts and minimally likely direct impacts to identified sensitive, special status, or candidate animal species. Project activities would be constrained to the roadway shoulder and immediate area thereof including the median and wash area to perform project activities; therefore, there is minimal likelihood of direct impacts to migratory birds, California spotted owl, bats, and San Bernardino flying squirrel. There are potential direct impacts of the project on Southern rubber boa. These impacts to species, detailed below, will be avoided and minimized during construction through the implementation of Caltrans Standard Best Management Practices (BMPs), the BMPs in the Stormwater Pollution Prevention Plan (SWPPP), the 2018 Standard Specifications (or latest version), and BIO-1 through BIO-5.

- Migratory Birds The proposed project would have minimal impact to migratory birds due to temporary increased noise levels and/or vegetation removal around the project site during construction. The likelihood of migratory birds' nests being directly affected is minimal because project activities would be constrained to the roadway shoulders and immediate areas. BIO-1 will be implemented to avoid this impact.
- California Spotted Owl The proposed project would have indirect impacts to the California spotted owl from construction and minimally likely direct impacts due to project activities including tree removal. Project-related activities could deter California spotted owls from their typical flight paths or the project vicinity. Temporary indirect impacts from construction may include noise, dust, night lighting, and human encroachment. Furthermore, other permanent indirect issues associated with human encroachment, such as the introduction of nonnative species and trash, would permanently contribute to the degradation of habitat in the vicinity. BIO-1 and BIO-2 will be implemented to avoid and minimize these impacts.
- Bats The proposed project would have temporary and permanent indirect impacts to bat species, including temporary indirect disturbance (such as noise, dust, night lighting, and human encroachment) from construction activities. Indirect project-related activities could deter individuals from typical flight paths or the project vicinity. Night work and the use of temporary artificial lighting has been known to disturb bats. Other permanent indirect issues associated with human encroachment, such as the introduction of nonnative species and trash, would permanently contribute to the degradation of foraging habitat (i.e. riparian/riverine vegetation) in the vicinity. Due to current knowledge of bat behavior and the limited bat data available, project impacts will be addressed by the implementation of BIO-2 as an avoidance and minimization measure.

- San Bernardino Flying Squirrel The proposed project would have temporary indirect impacts to San Bernardino flying squirrel from construction, as well as direct impacts from project activities including potential tree removal. Project-related activities could deter individuals from typical flight paths or the project vicinity. Furthermore, other permanent indirect issues associated with human encroachment such as the introduction of nonnative species and trash, would permanently contribute to the degradation of habitat in the vicinity. Project impacts will be avoided/minimized by implementing BIO-2 as an avoidance and minimization measure.
- Southern Rubber Boa The proposed project would have potential direct impacts and temporary indirect impacts to Southern rubber boas. The proposed project will not reduce, alter or modify the overall population or lead towards habitat degradation of the southern rubber boa. The project has the potential to directly impact these species via crushing or other forms of injury while they are traversing the project impact area. Indirect effects include temporary surface/vibration disturbance. Caltrans has made the California Endangered Species Act (CESA) determination of No Take. The project will implement BIO-3, BIO-4, and BIO-5 to minimize and avoid these impacts. Other indirect impacts to these species' habitats are addressed by Caltrans Standard BMPs and 2018 Standard Specifications (or latest version).

b) Less than Significant

The proposed project would have indirect impacts and minimally likely direct impacts to natural communities, and minimal direct and indirect impacts to riparian habitats. Project activities would be constrained to the roadway shoulder and immediate area; therefore, the likelihood of direct impacts to these protected lands is minimal. The project may have indirect impacts to protected lands including habitat conversion by introduction of invasive species. These impacts will be avoided through the implementation of Caltrans Standard Best Management Practices (BMPs), the BMPs in the Stormwater Pollution Prevention Plan (SWPPP), and the 2018 Standard Specifications (or latest version).

c) Less Than Significant with Mitigation Incorporated

The proposed project would have direct and indirect impacts to waters and wetlands. Direct effects on waters include the loss of vegetation from direct removal due to site preparation activities such as vegetation clearing, grubbing, and grading. However, the loss of resources is deemed minimal as vegetation will be restored where applicable. Other indirect effects to waters may include 1) sediment entering drainage areas from vegetation clearing and/or 2) invasive, non-native plants transported into areas along the roadway. The proposed project design has not yet been completed and therefore an impacts analysis has not been developed.

Caltrans Standard BMPs, the BMPs in the SWPPP, and 2018 Standard Specifications (or latest version) will be implemented to minimize effects during construction. Proposed project impacts to jurisdictional areas will be mitigated and coordinated with US Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) during the permitting process. It is anticipated that a minimum 1:1 ratio will be applied to any permanent impacts of jurisdictional waters to be paid in the form of onsite restoration, in-lieu fee, mitigation bank credit, or land acquisition.

d) No Impact

The proposed project would have no impact on fish or wildlife movement. The proposed project is not located within any identified linkage area within South Coast Linkages.

e) No Impact

This project will not conflict with any local policies or ordinances protecting biological resources.

f) No Impact

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Avoidance, Minimization, and/or Mitigation Measures

BIO-1: Preconstruction nesting Bird Survey: If construction occurs within nesting bird season (Feb 1- Sept 30), conduct pre-construction nesting bird surveys before construction to locate and avoid nesting birds. If an active avian nest is located, a no construction buffer will be established and monitored at the discretion of the qualified biologist.

BIO-2: Lighting: Artificial lighting shall be directed at the work site only.

BIO-3: Environmental Awareness Training (WEAP): A qualified biologist will present a biological resource information program/WEAP prior to ground-disturbing activities to all personnel that will be present within the project limits for longer than 30 minutes at any given time.

BIO-4: Pre-construction Clearance Surveys: A pre-construction clearance survey will be required at least 30 days prior to the beginning of work at each culvert.

BIO-5: Southern Rubber Boa in Project Area Avoidance: If during construction activities a southern rubber boa is discovered within the project site, all construction activities shall stop, and the Caltrans biologist and resident engineer shall be notified. A consult with CDFW may be initiated.

CULTURAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include: National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

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

Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

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

CEQA Significance Determinations for Cultural Resources

a) No Impact

The proposed project will not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5

b) No Impact

The proposed project will not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

c) No Impact

The proposed project does not anticipate any disturbance to human remains, including those interred outside of dedicated cemeteries.

Avoidance, Minimization, and/or Mitigation Measures

No measures are required for cultural resources; however, the following standard Caltrans design features will be included:

CR-1: If buried cultural resources are encountered during Project Activities, it is Caltrans policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

CR-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC who will then notify the Most Likely Descendant. At this time, the person who discovered the remains will contact Andrew Walters, Senior Environmental Planner, Cultural Studies [(909) 383-2647] or Gary Jones, District Native American Coordinator [(909) 383-7505] so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

ENERGY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Energy

a) No Impact

The proposed project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation

b) No Impact

The proposed project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Avoidance, Minimization, and/or Mitigation Measures

None

GEOLOGY AND SOILS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more

information, please see the Department's Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

CEQA Significance Determinations for Geology and Soils

a) No Impact

The proposed project will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i) Rupture of a known earthquake fault
- ii) Strong seismic ground shaking
- iii) Seismic-related ground failure, including liquefaction
- iv) Landslides

b) No Impact

The proposed project would not result in substantial soil erosion or the loss of topsoil.

c) No Impact

The proposed project is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project.

d) No Impact

The proposed project is not located on expansive soil.

e) No Impact

The proposed project does not include septic tanks or alternative waste water disposal systems.

Avoidance, Minimization, and/or Mitigation Measures

None.

GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Greenhouse Gas Emissions

a) No Impact

While the proposed project would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. With implementation of construction GHG-reduction measures, the impact would be less than significant.

b) No Impact

The proposed project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

Avoidance, Minimization, and/or Mitigation Measures

TR-1 : A traffic management plan will be implemented to minimize traffic delays and associated idling emissions during construction.

GHG-1: All construction debris suitable for recycling will be recycled.

HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. The purpose of CERCLA, often referred to as "Superfund," is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

a) Less Than Significant Impact

The proposed project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) Less Than Significant Impact

The proposed project would not 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) No Impact

The proposed project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

d) No Impact

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

e) No Impact

The proposed project is not located within an airport land use plan or within two miles of a public airport or public use airport.

f) No Impact

The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) No Impact

The proposed project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Avoidance, Minimization, and/or Mitigation Measures

HW-1: Culvert 19 classifies as type COM regulated soil and requires California Department of Toxic Substances Control notification.

HW-2: Standard Special Provisions (SSP) 7-1.02K(6)(j)(iii) Earth materials containing lead and include bid items 070030 for a Lead Compliance Plan.

HW-3: SSP 14-11.12 Remove yellow traffic stripe and pavement markings with hazardous waste residue.

HW-4: SSP 84-9.03C Remove traffic stripes and pavement markings containing lead.

HW-5: SSP 36-4 Containing lead and paint and thermoplastic. Requires a Lead Compliance Plan for removal when residue is definitely nonhazardous.

HYDROLOGY AND WATER QUALITY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Hydrology and Floodplain

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.

- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Water Quality and Stormwater Runoff

Federal Requirements: Clean Water Act

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

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is

no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

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

State Water Resources Control Board and Regional Water Quality Control Boards

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

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4) Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal

Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department’s MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

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

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

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

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

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

CEQA Significance Determinations for Hydrology and Water Quality

a) Less than Significant Impact

The potential temporary effects of the proposed project on the quality of the water in the area would come from runoff during construction, including erosion. There are no municipal or domestic water supply reservoirs or groundwater percolation facilities within the project limits. There are no RWQCB special requirement and Treatment Best Management Practices (BMPs) will be utilized on the project. The Treatment BMP strategy will be to install debris traps immediately upstream or downstream of each culvert location if there is sufficient right of way, groundwater depth, and adequate soil percolation. Construction site BMPs will be utilized including soil binders to stabilize slopes, and will implement concrete waste management to wash concrete waste. There will be street sweeping and vacuuming, and other non-storm water management BMPs to prevent wastes generating and residues with the potential to discharge pollutants.

b) No Impact

There are no municipal or domestic water supply reservoirs or groundwater percolation facilities within the project limits. The depth to groundwater ranges from 11 to 30 feet in the project area. The project is not expected to affect the amount of water consumed regionally through increased withdrawals from groundwater sources.

c) i) ii) iii) Less than Significant Impact

Temporary

Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste, sanitary waste, and other chemicals. During construction activities, excavated soils would be exposed, and there would be an increase in potential for soil erosion compared to existing conditions. In addition, chemicals, liquid products, and petroleum products may be spilled or leaked during construction and have the potential to be transported via storm runoff into receiving waters. Construction activities as part of the project would disturb soil and increase the potential for soil erosion and suspended particles that can be generated from vehicles operating on the roadway. The disturbed soil area is defined by Caltrans as consisting of areas of exposed, erodible soil that are within the construction limits and that result from construction-related activity.

Construction site BMPs used on the project site would include soil binders to stabilize the slope, and will implement concrete waste management to wash concrete waste. There will be street sweeping and vacuuming, and the non-stormwater management BMPs to prevent waste generating and prevent residues with the potential to discharge pollutants.

The proposed project will involve replacing old culverts. A Section 1602 Streambed Alteration Agreement, and Section 401 Water Quality Certification permit are expected to be required.

c) iv) No Impact

The proposed project will involve replacing old culverts and does not anticipate impeding or redirecting flood flows

d) No Impact

The proposed project site is adjacent to Big Bear Lake. However, and as mentioned, the project is intended to ensure the safety and integrity of SR-18 and prevent situations where the road may suddenly become un-traversable. As such, inundation by seiche, tsunami, or mudflow is not anticipated to occur.

e) No Impact

The proposed project will involve replacing old culverts and does not anticipate any conflicts with any water quality control plans or groundwater management plans.

Avoidance, Minimization, and/or Mitigation Measures

WQ-1: Prior to the start of construction, a SWPPP for reducing impacts on water quality shall be developed by the contractor, and approved by the Department.

WQ-2: The SWPPP control measures shall address the following categories: soil stabilization practices; sediment control practices; sediment tracking control practices; wind erosion control practices; and non-storm water management and waste management and disposal control practices.

WQ-3: The contractor shall be required to comply with water pollution control provisions and SWPPP and conform to the requirements of the Department's Standard Specification Section 7-1.01G "Water Pollution," of the Standard Specifications.

WQ-4: If necessary, soil disturbed areas of the project site will be fully protected using soil stabilization and sediment control BMPs at the end of each day, unless fair weather is predicted.

LAND USE AND PLANNING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a) **No Impact**

The proposed project will involve replacing old culverts and will not divide an established community.

b) **No Impact**

The proposed project will involve replacing old culverts.. All work and vehicle staging will take place within the Caltrans right of way or within temporary construction easements. All access will be by existing paved roads. The proposed project would be consistent with existing zoning and land use designations, as no changes or incompatible land uses would result with implementation of the project. The project would be consistent with the County of San Bernardino General Plan, Land Use Element, Bear Valley Community Plan Policy BV/LU1.2 as the project improvements would be compatible with surrounding uses and Policy BV/CI1.5 which ensures that transportation system improvements are made to SR-18. Furthermore, the proposed project would not divide an established community and would not conflict with any applicable land use plan, policy, or regulation, as the project would not change any land use designations.

Avoidance, Minimization, and/or Mitigation Measures

None

MINERAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The Surface Mining and Reclamation Act (SMARA) was framed to address the loss of regionally substantial material deposits to land uses that preclude mining. SMARA mandates a two-phased mineral resource conservation process called classification-designation. The California Division of Mines and Geology (CDMG) is responsible under SMARA for carrying out the classification phase of the process. The State Mining and Geology Board is responsible for the second phase, which allows the State Mining and Geology Board to designate areas in production-consumption region that contain substantial deposits of Portland cement concrete grade aggregate (valued for its importance in construction and versatility) that may be needed to meet the region's future demand.

CEQA Significance Determinations for Mineral Resources

a) b) No Impact

According to the Mineral Land Classification map by the California Department of Conservation, Division of Mines and Geology, the proposed project area is located in Mineral Resource Zone (MRZ) category MRZ-4 defined as areas of no known mineral occurrences where geologic information does not rule out either the presence or absence of significant mineral resources. As the proposed project would consist of replacing old culverts by digging out the current culvert and replacing in-kind, impacts to mineral resources are not anticipated to occur.

Avoidance, Minimization, and/or Mitigation Measures

None

NOISE

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The California Environmental Quality Act (CEQA) provides broad basis for analyzing and abating highway traffic noise effects. The intent of this law is to promote the general welfare and to foster a healthy environment.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible.

CEQA Significance Determinations for Noise

a) Less than Significant Impact

The proposed project would replace 31 existing culverts along SR-18. Construction of the proposed project will involve cutting the existing pavement and removing it in chunks and then excavating the existing culvert pipe. The existing culvert pipe will be removed and replaced with a new corrugated steel pipe in its place. The soil will be replaced under the roadbed and the road surface will be replaced. The project will require a paving machine, rollers, and plate compactor to reinstall the road surface. Portions of the project are located near manmade structures, consisting of residences, public bathrooms, businesses, and surrounding transportation infrastructure such as driveways, curbs, parking lots, and turn outs. Construction noise from equipment and vehicles is anticipated to result in short-term, temporary impacts. However, due to the short duration of construction at each culvert location, construction noise impacts are anticipated to be less than significant. Construction noise would be short-term and

intermittent during the construction period and construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02 (measure **NOI-1**).

The project would not expose people to or generate noise levels in excess of standards established in a general plan or noise ordinance, or applicable standards of other agencies. The project is a Type III Project under 23 CFR 772.7; therefore, Caltrans Engineering has determined that a noise study report was not required for the project.

b) Less than Significant Impact

Any ground-borne noise or vibration would be limited to the construction phase at each culvert replacement location. The proposed project would comply with Caltrans' Standard Specifications as outlined in **NOI-3**.

c) No Impact

The Big Bear Airport is located at 501 Valley Boulevard, in the City of Big Bear. The airport is adjacent to West North Shore Drive to the north, Greenway Drive to the west and West Big Bear Boulevard to the south. As the project involves the replacement of old culverts with in-kind culverts, no habitable structures would be constructed. The project would not expose people residing or working in the project area to excessive noise levels.

Avoidance, Minimization, and/or Abatement Measures

NOI-1: The contractor shall comply with all local sound control and noise level rules, regulations and ordinances that apply to any work performed pursuant to contract.

NOI-2: Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler or a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

NOI-3: To minimize any potential temporary impacts from construction-generated noise, sound control will conform to the dBA (decibel-actual) restrictions and noise monitoring protocols outlined in Caltrans 2018 Standard Specification 14-8.02.

POPULATION AND HOUSING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. The CEQA guidelines (Section 15126.2[d]) require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

The Department's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix A for a copy of the Department's Title VI Policy Statement.

CEQA Significance Determinations for Population and Housing

a) No Impact

The proposed project will not induce unplanned population growth.

b) No Impact

The proposed project will take place within Caltrans right of way or within temporary construction easements and all access will be by existing paved roads. Accordingly, no residents or businesses would need to be relocated as a result of implementing the project. The

proposed project would not necessitate the relocation of any existing developments and/or people.

Avoidance, Minimization, and/or Abatement Measures

None

PUBLIC SERVICES

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

CEQA Significance Determinations for Public Services

a) No Impact

Fire Protection

The County of San Bernardino Fire Department, Big Bear City, and Big Bear Lake Fire Department provides fire protection in the project vicinity. The following are the fire stations in the project vicinity:

- San Bernardino Fire Station 96, located at 39188 Rim of the World Drive, Fawnskin, CA 92333.
- Big Bear Fire Department Headquarters Station 281, located at 41090 Big Bear Boulevard, Big Bear Lake, CA 92315.
- Big Bear Fire Department Station 282, located at 301 Big Bear Boulevard, Big Bear City, CA 92314.
- Big Bear Fire Department Station 283, located at 550 Maple Lane, Big Bear Lake, CA 92315.
- Big Bear Fire Department Station 284, located at 45360 Lucky Baldwin Ranch Road, Big Bear City, CA 92314.

The proposed project involves replacing old, damaged, culverts and replacing with in kind culverts. The proposed project would not result in an increase in population, and therefore would not increase the demand for fire services. No fire stations would be acquired or displaced. The proposed project would not induce growth or increase population in the study area or the greater community beyond that previously planned for and would not result in the need for

additional fire protection. A full closure of SR-18 is not anticipated, and one-way traffic control will be implemented during construction. A Transportation Management Plan (TMP) will be implemented to maintain safe traffic movement through the construction zone, as well as to minimize traffic delays.

a) No Impact

Police Protection

The San Bernardino County Sheriff's Department provides police protection in the project vicinity. The Big Bear Lake Patrol Station is located at 477 Summit Boulevard, Big Bear Lake, 92315. The proposed project would not induce growth or increase population in the study area or the greater community beyond that previously planned for and would not result in the need for additional police services. A full closure of SR-18 is not anticipated, and one-way traffic control will be implemented during construction. A Transportation Management Plan (TMP) will be implemented to maintain safe traffic movement through the construction zone, as well as to minimize traffic delays.

a) No Impact

Schools

The Bear Valley Unified Schools District operates the following schools near the project site:

- North Shore Elementary School, located at 765 North Stanfield Cutoff, Big Bear Lake, CA 92315.
- Big Bear High School, located at 351 Maple Lane, Big Bear City, CA 92314.
- Chautauqua High School, located at 525 Maple Lane, Big Bear City, CA 92314.
- Baldwin Lane Elementary School, located at 44500 Baldwin Lane, Sugarloaf, CA 92386.

The proposed project would not result in accessibility problems to existing schools in the vicinity of the project and is not expected to result in any other impacts on school services.

a) No Impact

Parks

As the proposed project is located near Big Bear Lake within the San Bernardino National Forest, several parks and recreational facilities are located near the project including Big Bear Lake, Stanfield Marsh Wildlife and Waterfowl Preserve, Stanfield Marsh Boardwalk, Castle Rock Trail 1W03, Boulder Bay Park and Kayak Park, Pleasure Point Marina, Skyline Trail 2N10, Alpine Slide at Magic Mountain, Big Bear Marina, Rotary Pine Knot Park, Pine Knot Marina, Veterans Park Kayak and Stand Up Paddle (SUP) Rentals, Ski Beach Park, Bark Park, Meadow Park, Alpine Pedal Path Trail 1E050, Big Bear Snow Play, Big Bear Lake Convention Center, Big Bear City Park (closed), Gold Mountain, Tanglewood Group Campground, Baldwin Lake Ecological Reserve, Cactus Flat OHV Staging Area, Smarts Ranch OHV Road 3N03, and Silver Peak Trailhead.

The proposed project would not result in the full closure of SR-18 and one-way traffic control will be implemented during construction. The proposed project would not result in adverse physical impacts to park facilities, and would not result in the need for additional park facilities.

a) **No Impact**

Other Public Facilities

As previously mentioned, the project is located along SR-38 near Big Bear Lake, and as such, several public facilities including parks, picnic facilities, and trails are located near the proposed project site (refer to response for *Parks*, above). However, as the project consists of replacing old culverts by replacing with in kind culverts, there would be no impacts on public facilities as a result of construction of the project.

Avoidance, Minimization, and/or Abatement Measures

None

RECREATION

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Recreation

a), b) No Impact

Big Bear Lake is a recreational lake owned by the Big Bear Municipal Water District (BBMWD), which is an independent special district charged with keeping the lake levels stable. The BBMWD also operates three of the 13 local marinas on the lake. All three BBMWD locations offer boat permits for public purchase, as well as some combination of launch ramps, public dock fishing, RV hookups, picnic areas, restrooms, and showers. The US Forest Service, the Big Bear Parks and Recreation District, and the City of Big Bear Lake each operate a marina on the lake, and the remaining seven marinas are privately owned. Furthermore, the eastern end of Big Bear Lake from Stanfield Cutoff to Division Drive is the Stanfield Marsh Waterfowl Preserve, and culverts Rank #6 at PM 51.69 and Rank #32 at PM 52.41 are in the preserve area.

Project implementation does not have the capacity to generate a substantial increase to any existing neighborhood, regional parks, or other recreational facilities such that substantial physical deterioration would occur, nor would it require the construction or expansion of existing recreational facilities.

Avoidance, Minimization, and/or Abatement Measures

None

TRANSPORTATION

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Transportation

a), b) No Impact

The project would not increase traffic because no new roadways or expansion of existing roadways would occur. The project would not create new traffic demand, directly or indirectly. The project would also not reduce congestion and/or improve the level of service of traffic. The proposed project would not 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) No Impact

The project consists of replacing deteriorated culverts and will not alter or introduce new roadway geometric features. As such, the project would not increase hazards due to a design feature or introduce any incompatible uses to the project area.

d) No Impact

Construction activities have the potential to result in temporary, localized, site-specific disruptions during the construction period. The project could lead to an increase in delay times for vehicles traveling through the construction area during the construction phase; however, the proposed project would include the preparation and implementation of a TMP (measure **TRF-1**), which would avoid or minimize any potential impacts. With the relatively short period of

construction at each culvert location, impacts would be less than significant during the construction period.

Avoidance, Minimization, and/or Abatement Measures

TRF-1: Construction will be performed on one direction of travel at a time to preserve access for all travelers

TRF-2: Prior to construction, a Traffic Management Plan will be developed by Caltrans to minimize the potential transportation related impacts during construction.

TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

See the Regulatory Setting Section in the Cultural Resources Section for a discussion of tribal cultural resources.

CEQA Significance Determinations for Tribal Cultural Resources

a), b) No Impact

The proposed project would replace old culverts within in kind culverts. All work and vehicle staging will take place within Caltrans right of way or within temporary construction easements. All access will be by existing paved roads. Based on cultural resources reviews, the project has no potential affect historic properties, and no additional archaeological or built environment studies were required. Implementation of measure **CR-1** and **CR-2** would reduce impacts to cultural resources to less than significant levels.

Avoidance, Minimization, and/or Abatement Measures

CR-1: If buried cultural resources are encountered during Project Activities, it is Caltrans policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

CR-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC who will then notify the Most Likely Descendant. At this time, the person who discovered the remains will contact Andrew Walters, Senior Environmental Planner,

Cultural Studies [(909) 383-2647] or Gary Jones, District Native American Coordinator [(909) 383-7505] so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

UTILITIES AND SERVICE SYSTEMS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals??	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a) No Impact

Construction of the project would not generate the need for additional wastewater treatment and would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board.

b) No Impact

Due to the nature and scope of the proposed improvements, project implementation would not require or result in the construction of new water or wastewater treatment facilities.

c) No Impact

The proposed project would consist of replacing old culverts and replacing with in kind culverts. As such, the project would replace the existing, deteriorating culverts with new culverts. The project would not result in the expansion of existing facilities.

d) No Impact

The proposed project would require the use of a local landfill, if applicable, to dispose of demolition materials during construction. The nearest landfill is the Big Bear Transfer Station operated by the County of San Bernardino Solid Waste Management Division. The use of local landfills would be temporary during construction. It is Caltrans' policy to recycle materials whenever possible. The proposed project would be served by a San Bernardino Solid Waste Management Division landfill with sufficient capacity to serve its solid waste disposal needs during construction.

e) No Impact

The proposed project would be in compliance with all federal, state, and local solid waste statutes and regulations.

Avoidance, Minimization, and/or Abatement Measures

None

WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The majority of the project limits are in “Very High” fire hazard zones, in the City of Big Bear Lake, Big Bear City, portions of Baldwin Lake, and north of Cactus Flats. The project area is a patchwork of Local Responsibility Area (LRA) in the City of Big Bear Lake, State Responsibility Area (SRA) in Big Bear City and areas of Baldwin Lake, and Federal Responsibility Area (FRA) between Big Bear Dam and the city limits, and most of the area between Big Bear City and Lucerne Valley.

CEQA Significance Determinations for Wildfire

a) **No Impact**

The proposed project will not substantially impair an adopted emergency response plan or emergency evacuation plan.

b) **No Impact**

The proposed project will not exacerbate wildfire risks or expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a fire.

c) **No Impact**

The installation or maintenance of associated infrastructure is not part of the project scope.

d) No Impact

The project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides. As mentioned under Section VII, Geology and Soils, the project locations are not within a landslide area and the probability is low.

Avoidance, Minimization, and/or Abatement Measures

None

MANDATORY FINDINGS OF SIGNIFICANCE

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) No Impact

The project will consist of relining and replacing old culverts by digging out the current culvert and replacing with in-kind culverts. All work and vehicle staging will take place within Caltrans right of way or within temporary construction easements. All access will be by paved roads. The proposed project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal. With implementation of the measures **BIO-1** through **BIO-6**, no biological resources will be impacted. There will be no take of state listed species. There are no wetlands within the project limits.

b) No Impact

As the project involves the replacement of old culverts with new in-kind culverts, combined with the relatively short-term construction timing at each culvert replacement location, cumulative impacts are not anticipated.

c) No Impact

The project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

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 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂.

GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called "carbon dioxide equivalent" (CO₂e). The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.

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 GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

REGULATORY SETTING

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

Federal

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

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

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom

line of sustainability” (FHWA n.d.). 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.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of 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.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

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

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

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

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

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). 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.

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

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

AB 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles travelled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

ENVIRONMENTAL SETTING

The proposed project spans both rural and urban areas of San Bernardino County, from the southern shores of Big Bear Lake to Lucerne Valley. The project area is in a mountainous region, with large open space and resource conservation areas, as well as commercial, residential, recreational, and public facility land uses within the City of Big Bear Lake. SR-18 is the main transportation route to and through the area for both passenger and commercial vehicles. Between Big Bear Dam and Stanfield Cutoff (PM 44.3/51.6) and the end of Greenway Drive north to Cushenbury (PM 54.5/68.0), there are no alternate routes aside from local roads within the City of Big Bear Lake or further south through the mountains. Between Stanfield Cutoff and Greenway Drive (PM 51.6/54.5), various local roads and SR-38 serve as alternate routes.

The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) guides transportation and housing development in the project area. Additionally, San Bernardino County and the City of Big Bear Lake both have General Plans which address greenhouse gases (GHGs) in their respective jurisdictions in the project area. The City of Big Bear Lake Greenhouse Gas Reduction Compliance Action Plan, prepared for the City by the San Bernardino Association of Governments (SANBAG), also outlines the City's GHG reduction measures and 2020 emission targets.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

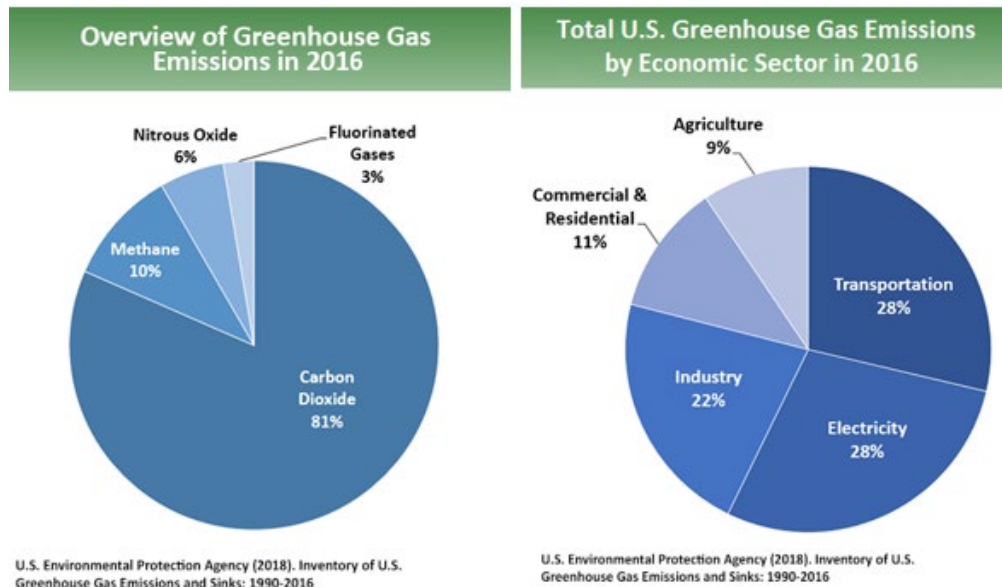


Figure 3.3.1: U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO₂e for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a).

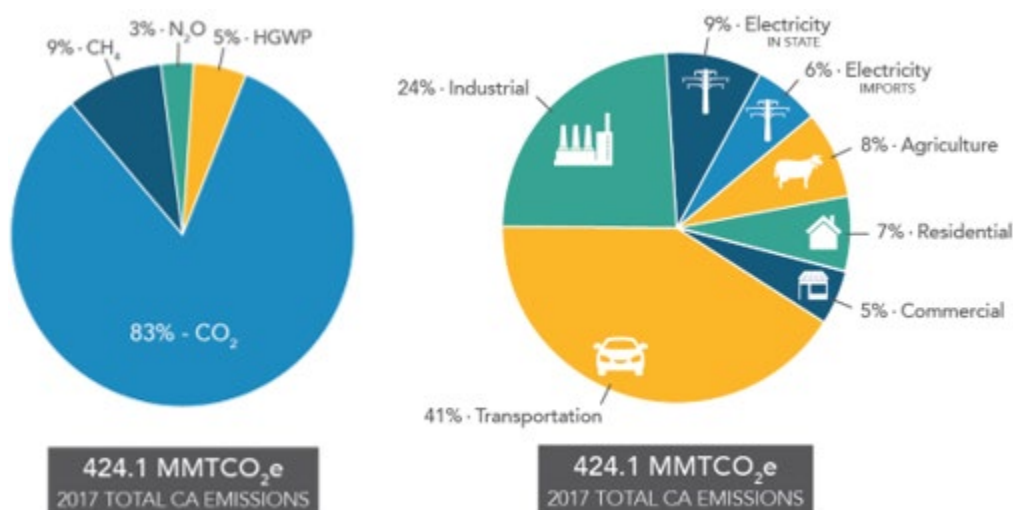


Figure 3.3.2: California 2017 Greenhouse Gas Emissions

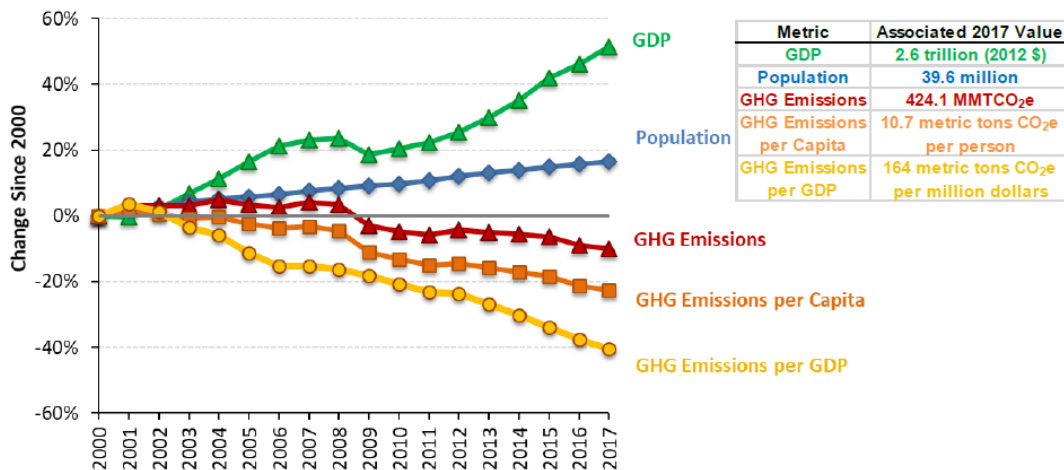


Figure 3.3.3: Change in California GDP, Population, and GHG Emissions since 2000 (Source: ARB 2019b)

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. 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 GHG emissions.

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the RTP/SCS for SCAG. The regional reduction target for SCAG is 8 percent for 2020 and 19 percent for 2035 (ARB 2019c).

PROJECT ANALYSIS

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH₄ and N₂O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) 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, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a

cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to restore deteriorated culverts to standard by reline or replace and will not increase the vehicle capacity of the roadway. This type of project generally does not cause an increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR-18, no increase in vehicle miles traveled (VMT) would occur as result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

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

The Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model Version 9.0.0 was used to quantify the expected construction-related GHG emissions related to the proposed project. Assuming a build year of 2023 with 150 working days over 10 months, the project is anticipated to generate a total of 1462.46 metric tons, or 1,612.09 US tons of CO₂e as a result of construction activities. The majority of the emissions considered in the CO₂e total emissions are anticipated to be CO₂ with a total of 1595.50 US tons emitted. The CO₂e total emissions also included NO_x (7.81 US tons), CO (7.13 US tons), PM 10 (1.28 US tons), and less than 1 US ton each of ROG, PM 2.5, SO_x, CH₄, and N₂O.

The project would comply with all requirements of the South Coast Air Quality Management District. In addition, all construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions. Under Avoidance and Minimization Measure TR-2, a traffic management plan will be implemented to minimize traffic delays and associated idling emissions during construction.

CEQA Conclusion

While the proposed project will result in a slight increase in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. With implementation of construction GHG-reduction measures, the impact would be less than significant.

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

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (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 farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

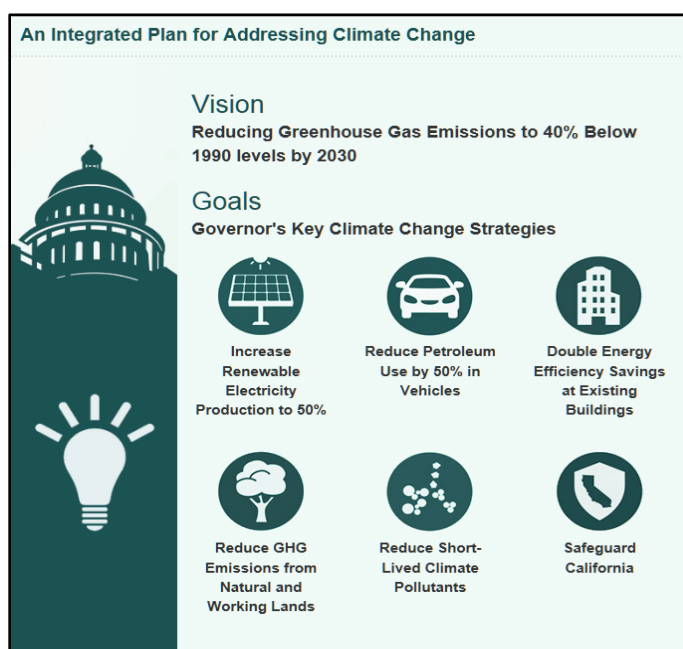


Figure 3.3.4: California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

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

CALIFORNIA TRANSPORTATION PLAN (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

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

CALTRANS STRATEGIC MANAGEMENT PLAN

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

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

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

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 Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

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

A traffic management plan (TMP) will be implemented to maintain traffic safety through the construction zone and to minimize traffic delays (TR-1). The reduction of traffic delays would also reduce short-term increases in GHG emissions from disruptions in traffic flow.

Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations.

Caltrans Standard Specifications Section 14-9, Air Quality, a part of all construction contracts, requires contractors to comply with all federal, state, regional, and local rules, regulations, and ordinances related to air quality.

Requirements of the South Coast Air Quality Management District (SCAQMD) will apply to this project. Requirements that reduce vehicle emissions, such as limits on idling time, may help reduce GHG emissions.

Consistent with the Program Environmental Impact Report prepared for the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, the proposed project will also minimize GHG emissions by recycling construction debris to maximum extent feasible and using energy- and fuel-efficient vehicles and equipment that meet or exceed EPA/NHTSA/CARB standards.

GHG-1: All construction debris suitable for recycling will be recycled.

ADAPTATION

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. Ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Chapter 12, “Transportation,” presents a key discussion of vulnerability assessments. It notes that “asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime” (USGCRP 2018).

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation 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” (U.S. DOT 2011).

FHWA order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California’s Fourth Climate Change Assessment* (2018) is the state’s effort to “translate the state of climate science into useful information for action” in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the “combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.”
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the “capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience”. Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the “susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt.” Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class,

sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

Caltrans District 8 completed a Climate Change Vulnerability Assessment in September of 2019. This assessment estimated the effects of climate change on Caltrans infrastructure and projects in San Bernardino and Riverside Counties with regards to temperature, precipitation, wildfire, extreme weather impacts, and decision-making going forward.

SEA-LEVEL RISE

The proposed project is outside the coastal zone and is 5000-6800 feet above sea level, therefore it is not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

FLOODPLAINS

In the project area, 2025 100-year precipitation depth is estimated to increase an average of 6.0 percent over the length of the project. 2055 and 2085 increases are estimated at 7.8 percent and 7.2 percent respectively. Estimated change in 100-year precipitation depth varies along SR-18 in the project area but generally increases towards the southwest end of the project limits. This anticipated increase in precipitation, combined with reports of overtopping from local Caltrans Maintenance staff has led to discussion in the project development team (PDT) to upsize culverts where necessary and feasible. Regardless of any future decision to upsize, all identified culverts will be restored from their existing diameters, which are constrained due to damage and past relining, to their original diameters which were designed for the flow experienced at each point in the drainage system. The project will maintain or improve the capacity, and therefore the resilience, of the drainage systems. The project is not anticipated to exacerbate the impacts of flooding intensified by climate change.

WILDFIRE

The majority of the project limits are in “Very High” fire hazard zones, in the City of Big Bear Lake, Big Bear City, portions of Baldwin Lake, and north of Cactus Flats. The project area is a patchwork of Local Responsibility Area (LRA) in the City of Big Bear Lake, State Responsibility Area (SRA) in Big Bear City and areas of Baldwin Lake, and Federal Responsibility Area (FRA) between Big Bear Dam and the city limits, and most of the area between Big Bear City and Lucerne Valley.

The proposed project does not alter the drainage, soils, or topography of the project area and will not increase the risk or severity of downslope or downstream flooding or landslides, or of pollutant concentration in the event of a wildfire. During construction, one lane of travel at a time would be temporarily closed and flaggers will allow traffic to pass. The project will not impair emergency response vehicles or emergency evacuation. The project is not anticipated to exacerbate the impacts of wildfires intensified by climate change.

References

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- California Air Resources Board (ARB). 2019c. *SB 375 Regional Plan Climate Targets*. <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed: August 21, 2019.
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- U.S. Department of Transportation (U.S. DOT). 2011. *Policy Statement on Climate Change Adaptation*. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.
- U.S. Environmental Protection Agency (U.S. EPA). 2009. *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*. <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>. Accessed: August 21, 2019.
- U.S. Environmental Protection Agency (U.S. EPA). 2018. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. Accessed: August 21, 2019.

U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. <https://nca2018.globalchange.gov/>. Accessed: August 21, 2019.

Distribution List

A public notice of this IS and/or a Notice of Intent to Adopt a Mitigated Negative Declaration was distributed to federal, state, regional and local agencies, elected officials and utilities and service providers. In addition, property owners and occupants that may be impacted by the project were provided the Notice of Intent.

Land Use Services
Department
477 Summit Boulevard
Big Bear Lake, CA 92315

United States Army Corps
of Engineers
Planning Division
911 Wilshire Blvd
Los Angeles, CA 90017

US Dept of Agriculture
Forest Service
Mountaintop Ranger
District
San Bernardino National
Forest
PO Box 290
Fawnskin, CA 92333

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39707 Big Bear Blvd.
Big Bear, CA 92315

City of Big Bear
Rick Herrick, Mayor Pro
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39707 Big Bear Blvd.
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City of Big Bear
David Caretto,
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Bob Jackowski,
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Bill Jahn, Councilmember
39707 Big Bear Blvd.
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Big Bear Chamber of
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630 Bartlett Road
Big Bear Lake, CA 92315

Bear Valley Community
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Shelly Egerer
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Mary Suzuki, Ed.D.
42271 Moonridge Road
Big Bear Lake, CA 92315

Big Bear City Community
Services District
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Big Bear City, CA 92314

Big Bear Valley Recreation
& Park District
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District
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Big Bear, CA 92315

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655 East Third Street
San Bernardino, CA 92415

California Highway Patrol
31230 Highway 18
Running Springs, CA
92382

California Department of
Fish and Wildlife
Region 6
3602 Inland Empire Blvd.,
Suite C-220
Ontario, CA 91764

Santa Ana Regional Water
Quality Control Board
3737 Main Street, Suite
500
Riverside, CA 92501-3348

State Clearinghouse
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Research
1400 Tenth St.
Sacramento, CA 95814

Big Bear Municipal Water
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Occupant
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Big Bear Lake, CA 92315

Colorado Regional Water
Quality Control Board
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#100
Palm Desert, CA 92260

Sherry Kister
E. 100 Country Club Blvd.
Big Bear, CA 92314
818-292-3344

Bear Valley Church
c/o Michael White, Lead
Pastor
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Big Bear Lake, CA 92315-
1546

Coggan Family, C. Middler
USA
c/o Shannon Lee
14326 Arnold Dr.
Glen Ellen, CA 95442

Michael & Joseph Timpke,
& Jill Johnson
650 Rapalla Ave.
San Pedro, CA 90732-
3330

Goldtibs, Inc.
2 Illuminata Lane
Ladera Ranch, CA 92694

HSJV Inv. LTD
818 Via Venti
Monterey Park, CA 91754

Towns-Man Partners LP
c/o Richard Saliture
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Redondo Beach, CA
90277-4708

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Accommodations, LLC
Northridge, CA 91324-
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List of Preparers

The following Caltrans personnel participated in the preparation of this Initial Study (IS):

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Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

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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.

A handwritten signature in blue ink, appearing to read "Laurie Berman".

LAURIE BERMAN
Director

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

List of Technical Studies

Draft Project Report for Project Approval. June 2020. Caltrans.

Aerially Deposited Lead Investigation Report. May 21, 2020. Stantec.

Initial Site Assessment Checklist. August 2, 2019. Caltrans.

Natural Environment Study (Minimal Impacts). February 2020. Caltrans.

Historic Property Survey Report. January 22, 2020. Caltrans.

Scoping Questionnaire for Water Quality Issues. February 2020. Caltrans.

Scenic Resource Evaluation and Visual Impact Assessment. January 2, 2020. Caltrans

Environmental Commitments Record

Permit Type	Agency	Date Submitted	Date Received	Expiration	Fee	Notes	Permit Requirement Completed	
							Name	Date
1600	California Department of Fish & Wildlife	TARGET 9/18/2021	TARGET 12/18/2021					
401	California Water Quality Control Board	TARGET 9/1/2021	TARGET 12/18/2021					
404	US Army Corps of Engineers	TARGET 9/18/2021	TARGET 12/18/2021					

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

ENVIRONMENTAL COMMITMENTS RECORD

State Route 18 Replace Culverts

08-SBd-018

PM 44.3/68.0

EA 08-0G690

PN 0812000110

Generalist: Vivian Ho

ECL: _____

Avoidance, Minimization, and/or Mitigation Measures	Page # in Env. Doc. Or Permit	Environmental Analysis Source (Technical Study, Environmental Document, and/or Technical Discipline)	Responsible for Development and/or Implementation of Measure	Timing/ Phase	If applicable, corresponding construction provision: (standard, special, non-standard)	Action(s) Taken to Implement Measure/if checked No, add Explanation here	PS&E Task Completed	Construction Task Completed	Environmental Compliance	
							Date / Initials	Date / Initials	YES	NO
CULTURAL RESOURCES										
CUL-1: Stop work if buried cultural resources are encountered during construction until a qualified archaeologist can evaluate the nature and significance of the find. In the event that human remains, including isolated, disarticulated bones or fragments, are discovered during construction-	N/A	District Environmental Cultural Resources (month, day year)	District Cultural Studies/ District Design/ Resident Engineer/ Contractor	Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

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							Date / Initials	Date / Initials	YES	NO
related activity, cease in the vicinity of the human remains.										
CUL-2: In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 50 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)383-2647 and Gary Jones, DNAC: (909)383-7505. Further provisions of PRC 5097.98 are to be followed as applicable.	N/A	District Environmental Cultural Resources (month, day, year)	District Cultural Studies/ District Design/ Resident Engineer/ Contractor	Final Design, Construction						
TRAFFIC AND TRANSPORTATION/BICYCLE AND PEDESTRIAN FACILITIES										

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

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TR-1: Construction will be performed on one direction of travel at a time to preserve access for all travelers.			District Design / District Traffic Management / District Environmental Planning / Resident Engineer / Contractor	Final Design, Construction						
TR-2: A TMP will be prepared prior to construction to minimize the potential transportation related impacts during construction.										
<u>VISUAL/AESTHETICS</u>										
VIS-1: Any removal of trees or shrubs shall be allocated replacement in kind with a minimum ratio of 3:1 to achieve massing comparable to previously existing. Ratio may be adjusted during PS&E by DLA.		Landscape Architecture; Scenic Resource Evaluation and Visual Impact Assessment	Design; Landscape Architecture; Environmental Planning; Resident Engineer; Contractor	Final Design, Construction						
VIS-2: Any removed trees shall be replanted at a suitable location away		Landscape Architecture; Scenic Resource	Design; Landscape Architecture;	Final Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

ENVIRONMENTAL COMMITMENTS RECORD

State Route 18 Replace Culverts

08-SBd-018

PM 44.3/68.0

EA 08-0G690

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from the traveled way and away from the DSA.		Evaluation and Visual Impact Assessment	Environmental Planning; Resident Engineer; Contractor							
VIS-3: Provide erosion control for all DSA areas or provide erosion control method as adjusted per water board guidelines.		Landscape Architecture; Scenic Resource Evaluation and Visual Impact Assessment	Design; Landscape Architecture; Environmental Planning; Resident Engineer; Contractor	Final Design, Construction						
VIS-4: Minimize tree removal, especially for larger trees.		Landscape Architecture; Scenic Resource Evaluation and Visual Impact Assessment	Design; Landscape Architecture; Environmental Planning; Resident Engineer; Contractor	Final Design, Construction						
VIS-5: Offset moderate/major impacts(s) to resident(s) affected by project work. This could mean additional cut and fill, small retaining walls, and/or a relocated culvert line.		Landscape Architecture; Scenic Resource Evaluation and Visual Impact Assessment	Design; Landscape Architecture; Environmental Planning; Resident	Final Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

ENVIRONMENTAL COMMITMENTS RECORD

State Route 18 Replace Culverts

08-SBd-018

PM 44.3/68.0

EA 08-0G690

PN 0812000110

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			Engineer; Contractor							
VIS-6: Remove all invasive plant species found in project limits.		Landscape Architecture; Scenic Resource Evaluation and Visual Impact Assessment	Design; Landscape Architecture; Environmental Planning; Resident Engineer; Contractor	Final Design, Construction						
HAZARDOUS WASTE / MATERIALS										
HAZ-1: Earth Material Containing Lead: Caltrans Standard Special Provision (SSP) 7-1.02k(6)(j)(iii), requiring a lead compliance plan, will be implemented for proper handling of earth material containing non-hazardous concentrations of lead. This measure will apply to all work locations.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction	SSP 7-1.02K(6)(j)(iii)					
HAZ-2: Material Containing Hazardous Concentrations of Aerially Deposited Lead: Caltrans Standard Special Provision (SSP) 14-11.08 will be implemented to		ADL Investigation Report	Design; Environmental Engineering; Resident	Final Design, Construction	SSP 14-11.08					

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

ENVIRONMENTAL COMMITMENTS RECORD

State Route 18 Replace Culverts

08-SBd-018

PM 44.3/68.0

EA 08-0G690

PN 0812000110

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control the handling, transport, and disposal of earth material containing hazardous concentrations of lead. A lead compliance plan is required. This measure will apply to work locations where hazardous levels of lead are detected in addition to SSP 7-1.02k(6)(j)(iii).			Engineer; Contractor							
HAZ-3: ADL should be buried covered in areas that are protected from erosion that may result from storm water run-on and run-off.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-4: ADL shall not be placed in areas where it would come in contact with groundwater or surface water (such as streams and rivers).		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-5: ADL shall be buried and covered in a manner that will prevent accidental or deliberate breach of the asphalt, concrete, and/or soil.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

ENVIRONMENTAL COMMITMENTS RECORD

State Route 18 Replace Culverts

08-SBd-018

PM 44.3/68.0

EA 08-0G690

PN 0812000110

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HAZ-6: ADL shall not be buried within ten (10) feet of culverts or locations subject to frequent worker exposure.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-7: ADL shall not be buried behind retaining walls (RW) above weep holes. The ADL needs to be buried below weep holes.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-8: Lead contaminated soil shall not be move outside the designated corridor boundaries. Stockpiling of lead contaminated soil within the specific corridors but outside the project area is prohibited.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-9: No other hazardous wastes shall be buried together with the ADL contaminated soil in the same area.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

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State Route 18 Replace Culverts

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HAZ-10: Lead contaminated soil shall only be placed on high ground (no sump areas or low points) so that the stockpiled soil will not come into contact with surface water run-on or run-off.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-11: Lead contaminated soil shall not be stock piled in environmentally and ecologically sensitive areas.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-12: Ensure that storm/rain run-off that has come into contact with stock piled lead contaminated soil will not come into contact with storm drains, inlets, or waters of the State.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-13: Lead contaminated soil shall only be buried in areas with limited access or where soil is covered and contained by pavement structure.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						

Date of ECR: 06/10/2020

Project Phase:

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State Route 18 Replace Culverts

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HAZ-14: Minimize the amount of leaded soil by characterizing and isolating leaded soil from non leaded soil.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-15: ADL soil cannot be placed anywhere that water infiltration will occur.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
HAZ-16: Leaded soil to be reused must be at least 5 feet above groundwater if DI WET is high.		ADL Investigation Report	Design; Environmental Engineering; Resident Engineer; Contractor	Final Design, Construction						
BIOLOGICAL RESOURCES										
BIO-1: Preconstruction Nesting Bird Survey: If construction occurs within nesting bird season (Feb 1-Sept 30), conduct pre-construction nesting bird surveys to locate and avoid nesting birds. If an active		Natural Environment Study (Minimal Impacts)	Design; Biological Studies; Resident Engineer; Contractor	Final Design, Construction	SSP or NSSP					

Date of ECR: 06/10/2020

Project Phase:

☒ PA/ED (DED/FED)☐ PS&E Submittal _____ %☐ Construction

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State Route 18 Replace Culverts

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PM 44.3/68.0

EA 08-0G690

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avian nest is located, a no-construction buffer will be established and monitored at the discretion of the qualified biologist.										
BIO-2: Lighting: Artificial lighting shall be directed at the work site only.		Natural Environment Study (Minimal Impacts)	Design; Biological Studies; Resident Engineer; Contractor							
BIO-3: Environmental Awareness Training (WEAP): A qualified biologist will present a biological resource information program/ WEAP prior to ground-disturbing activities to all personnel that will be present within the project limits for longer than 30 minutes at any given time.		Natural Environment Study (Minimal Impacts)	Design; Biological Studies; Resident Engineer; Contractor							
BIO-4: Preconstruction Clearance Surveys: A preconstruction clearance survey will be required at least 30 days prior to the beginning of work at each culvert.		Natural Environment Study (Minimal Impacts)	Design; Biological Studies; Resident Engineer; Contractor							

Date of ECR: 06/10/2020

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BIO-5: Southern Rubber Boa in Project Area Avoidance: If during construction activities a southern rubber boa is discovered within the project site, all construction activities shall stop, and the Caltrans biologist and resident engineer shall be notified. A consult with CDFW may be initiated.		Natural Environment Study (Minimal Impacts)	Design; Biological Studies; Resident Engineer; Contractor							
<u>Greenhouse Gas</u>										
GHG-1: All construction debris suitable for recycling will be recycled.		Environmental Document	Resident Engineer; Contractor	Construction						