

ARCATA 101 MERGE IMPROVEMENT PROJECT

HUMBOLDT COUNTY, CALIFORNIA

DISTRICT 1 – HUM – 101 (Post Miles 88.3 to 88.6)

01-0E890 / 0115000043

INITIAL STUDY

with Proposed 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) has prepared this Initial Study with proposed Negative Declaration (IS/ND) which examines the potential environmental effects of extending the State Route (SR) 299 entrance ramp onto northbound U.S. 101 to the Giuntoli Lane exit ramp in Arcata, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

What should you do?

- Please read this document.
- Additional copies of this document and related technical studies are available for review at the Caltrans District 1 Office at 1656 Union Street in Eureka.
- 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: July 30, 2020.
- Please send comments via U.S. mail to:

California Department of Transportation
Attention: Felicia Zimmerman
North Region Environmental–District 1
1656 Union Street
Eureka, CA 95501

- Send comments via e-mail to: felicia.zimmerman@dot.ca.gov
- Be sure to send comments by the deadline: July 30, 2020

What happens after this?

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 complete the design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Felicia Zimmerman, North Region Environmental-District 1, 1656 Union Street, Eureka, CA 95501; (707) 441-5603 Voice, or use the California Relay Service TTY number, 711 or 1-800-735-2929.

ARCATA 101 MERGE IMPROVEMENT PROJECT

**Improve merging movements by extending the SR 299 entrance ramp
onto northbound U.S. 101 to the Giuntoli Lane exit ramp from post miles
88.3 to 88.6 north of Arcata, Humboldt County, California**

DRAFT INITIAL STUDY with Proposed Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA

Department of Transportation

06/24/20

Date of Approval



Brandon Larsen, Office Chief
North Region Environmental-District 1
California Department of Transportation
CEQA Lead Agency

The following person may be contacted for more information about this document:

Felicia Zimmerman

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Proposed Negative Declaration

Pursuant to: Division 13, California Public Resources Code

SCH Number: Pending

Project Description

The California Department of Transportation (Caltrans) proposes to extend the SR 299 entrance ramp onto northbound U.S. 101 to the Giuntoli Lane exit ramp from post mile 88.3 to post mile 88.6 in Arcata, Humboldt County, California.

Determination

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

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 impact on the environment for the following reasons:

- The proposed project would have *no effect* with regard to agricultural and forest resources, air quality, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, tribal cultural resources, utilities and service systems, and wildfire.
- The proposed project would have *less than significant impacts* with regard to aesthetics and greenhouse gas emissions.



Brandon Larsen, Office Chief
North Region Environmental-District 1
California Department of Transportation

06/24/20

Date



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List of Abbreviated Terms

Abbreviation	Description
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ARB	Air Resources Board
ARPA	Archaeological Resources Protection Act
BMPs	Best Management Practices
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH ₄	Methane
CIA	Cumulative Impact Analysis
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CRHR	California Register of Historical Resources
CTP	California Transportation Plan
Department	Caltrans
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	greenhouse gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HPSR	Historic Property Survey Report
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
LCFS	low carbon fuel standard
MLD	Most Likely Descendent
MMTC02e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
N ₂ O	nitrous oxide

Abbreviation	Description
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ozone
OPR	Office of Planning and Research
PA	Programmatic Agreement
Pb	Lead
PDT	Project Development Team
PM	post mile
PRC	Public Resources Code
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SO ₂	sulfur dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TPZ	Timber Production Zones
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USC	United States Code
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

Chapter 1. Proposed Project

1.1. Project History

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA) for a safety improvement project on United States (U.S.) Highway 101 (US 101) between Post Miles (PMs) 88.3 and 88.6 within the city of Arcata in Humboldt County. The proposed project would extend the SR 299 entrance ramp onto northbound US 101 to the Giuntoli Lane exit ramp.

1.2. Project Description

Project Objective (Purpose and Need)

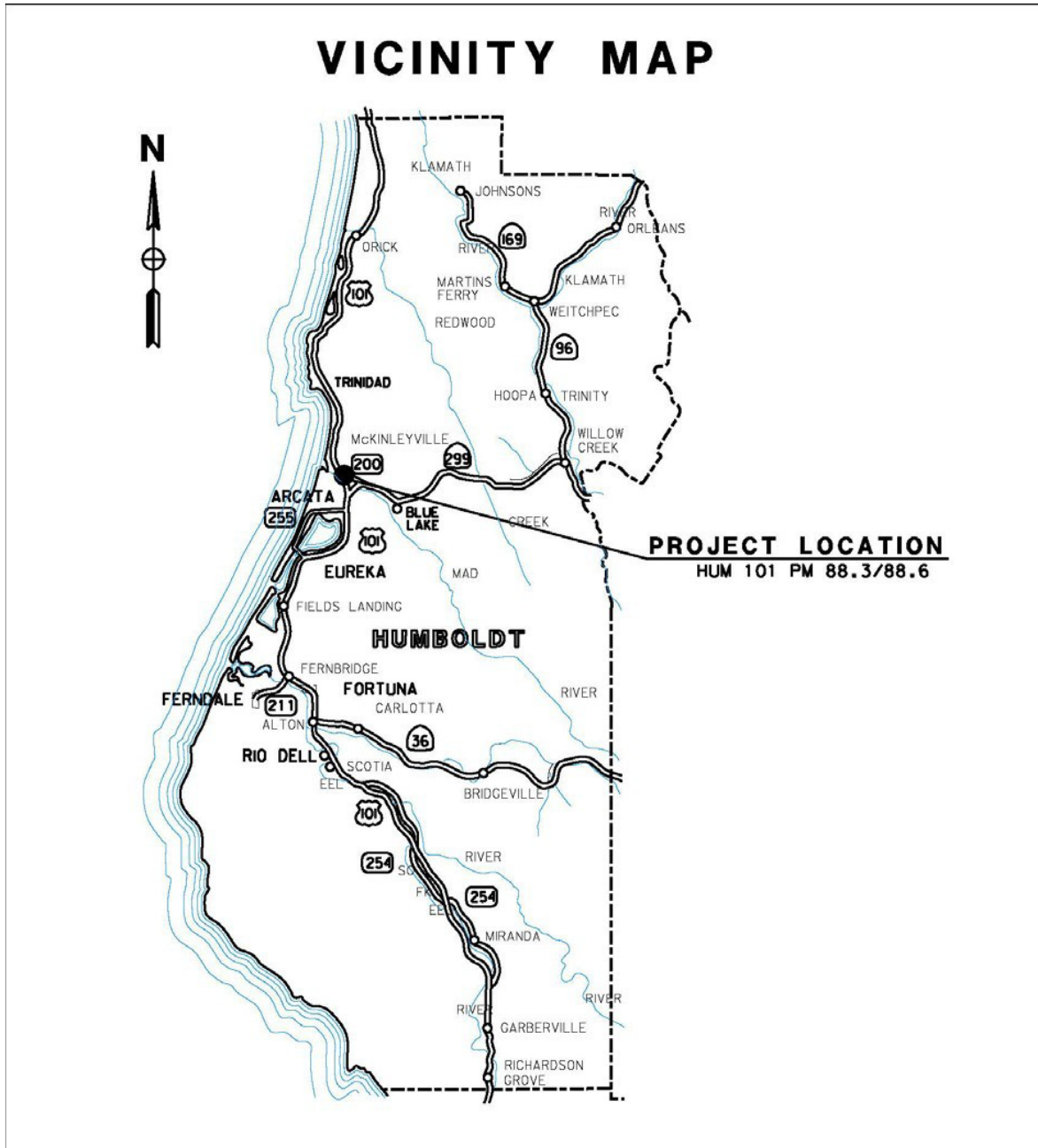
The purpose of this project is to improve merging movements by extending the SR 299 entrance on-ramp onto northbound U.S. 101 to the Giuntoli Lane exit ramp from post miles 88.3 to 88.6 just north of Arcata, Humboldt County, California. Merging impacts to northbound traffic on US 101 would be reduced, as well as the overall number of merging movements, as vehicles formerly entering the on-ramp to northbound US 101 off SR 299 may remain within the extended lane continuously to exit at the Giuntoli Lane off-ramp.

The project is needed because the existing on-ramp approach curve radius of 200 feet and acceleration lane length of 720 feet do not allow merging vehicles to obtain speeds similar to or compatible with US 101 northbound traffic, nor does it provide the distance needed to plan and execute smooth merges. Sight distance between both merging and through motorists is limited. Observations indicate these conditions often lead to abrupt lane changing and braking by motorists on northbound US 101 to avoid potential conflict.

Proposed Project

The proposed project would extend the entrance ramp by constructing a 12-foot lane with a 10-foot shoulder. A cantilevered soldier pile retaining wall with timber lagging would be built to allow the project to be constructed within the existing right of way. The wall would be 464 feet long with a maximum height of 14 feet. A safety barrier rail would be constructed along the wall. Two paved maintenance turnouts would be constructed, one on US 101 at approximately PM 88.55 and the second on SR 299 at approximately PM 0.20. Roadside signs would be replaced or relocated, and one luminaire relocated.

The existing right of way fence and vegetation along the east side of the project would be removed. The existing fence would be replaced with an 8'-tall security fence. Installation of the security fence would require 10'-wide temporary construction easements and would necessitate up to 5' of vegetation removal outside the existing Caltrans right of way. The area adjacent to the security fence would be replanted with native grasses, trees and shrubs. Grouted rock slope protection (RSP) would be placed between the wall and the fence to discourage camping.



Arcata 101 Merge Improvement Project 01-HUM-101-88.3/88.6

Figure 1. Project Vicinity

No-Build Alternative

The No-Build Alternative would not provide operational improvements for traffic entering US 101; thus, would perpetuate vehicle conflicts within the merge zone.

Alternatives Considered but Eliminated from Further Consideration

No alternatives other than the No-Build were considered for this project.

General Plan Description, Zoning, and Surrounding Land Uses

Adjacent land use includes residential, business, and a K-12 charter school. A small shopping center, gas stations, and motels located to the east of US 101 are accessed from the Giuntoli Lane exit. Mad River Hospital, located to the west of US 101, is also accessed from the Giuntoli Lane exit. Laurel Tree Learning Center and a residential subdivision abut the Caltrans right of way within the project limits. Bicyclists utilize the highway shoulder in the project area to access Giuntoli Lane and to commute to McKinleyville.

1.3. Permits and Approvals Needed

No permits are required for the project.

1.4. Standard Measures and Best Management Practices Included in All Alternatives

Aesthetics Resources

- VA-1:** Grading areas that were previously vegetated would be revegetated with appropriate native vegetation.
- VA-2:** Temporary construction easements and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.
- VA-3:** The removal of established trees and vegetation would be minimized and avoided where feasible.

Animal Species

- AS-1:** To protect migratory and nongame birds, their occupied nests and eggs, nesting-prevention measures would be implemented. Vegetation removal would be restricted to the period outside of the bird breeding season (September 15 through February 1) or, if vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest were located, the biologist would coordinate with the California Department of Fish and Wildlife (CDFW) to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.
- AS-2:** Partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (September 15 through February 1) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.

Cultural Resources

- CR-1:** An archeological monitor and Wiyot Tribal monitor would be used for ground-disturbing activities.
- CR-2:** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).
- CR-3:** If human remains were discovered, State Health and Safety Code § 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) § 5097.98, if the remains were thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

At this time, the person who discovered the remains would contact the Environmental Senior and Professionally Qualified Staff so they may work with the

MLD on the respectful treatment and disposition of the remains. Further provisions of PRC § 5097.98 would be followed as applicable.

Geology and Seismic/Topography

GS-1: In the unlikely event that fossils were encountered during project excavations, Caltrans Standard Specification 14-7 would be followed. This standard specification states that if unanticipated paleontological resources were discovered at the job site, all work within 60 feet would stop, the area around the fossil would be protected, and the Resident Engineer would be notified.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the “Lead in Construction” standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

Invasive Species

Standard measures described in PS-1 for restoring the project site post construction are also appropriate for the control of invasive species.

PS-1: After all construction materials are removed, the project area would be restored to a natural setting by grading, placing erosion control, and replanting. Replanting would be subject to a plant establishment period as defined by project permits, which would require Caltrans to adequately water plants, replace unsuitable plants, and control pests. Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

Plant Species

PS-1: After all construction materials are removed, the project area would be revegetated. Replanting would be subject to a plant establishment period as defined by project permits, which would require Caltrans to adequately water plants, replace unsuitable plants, and control pests. Caltrans would implement a program of invasive weed control in all areas of soil disturbance caused by construction to improve habitat for native species in and adjacent to disturbed soil areas within the project limits.

Traffic and Transportation

TT-1: Bicycle access would be maintained during construction.

TT-2: The Contractor would be required to reduce any access delays to driveways or public roadways within or near the work zones.

TT-3: A Traffic Management Plan (TMP) would be applied to project.

Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to U.S. Highway 101 and SR 299 throughout the construction period.

Water Quality and Stormwater Runoff

WQ-1: The project would incorporate pollution prevention and design measures consistent with the 2003 Caltrans Storm Water Management Plan to meet Water Quality Objectives (WQOs). This plan complies with the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ).

The project design would include standard water quality specifications, including implementation of Stormwater Pollution Prevention Plan (SWPPP).

Vegetated surfaces would feature native plants and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.

1.5. Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the United States National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS)—in other words, species protected by the Federal Endangered Species Act [FESA]).

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors noted below would be potentially affected by this project. Please see the CEQA checklist on the following pages for additional information.

Potential Impact Area	Impacted: Yes / No
Aesthetics	Yes
Agriculture and Forestry	No
Air Quality	No
Biological Resources	No
Cultural Resources	No
Energy	No
Geology/Soils	No
Greenhouse Gas Emissions	Yes
Hazards and Hazardous Materials	No
Hydrology/Water Quality	No
Land Use/Planning	No
Mineral Resources	No
Noise	No
Population/Housing	No
Public Services	No
Recreation	No
Transportation/Traffic	No
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A “No Impact” answer in the last column of the checklist reflects this determination.

The words “significant” and “significance” used throughout the checklist and this document are only related to potential impacts pursuant to CEQA. The questions in the CEQA Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project as well as standard measures that are applied to all or most Caltrans projects (such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions), are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA

CEQA broadly defines “project” to include “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (14 California Code of Regulations [CCR] § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project’s possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a “statement of objectives sought by the proposed project” (14 CCR § 15124(b)).

CEQA requires the identification of each potentially “significant effect on the environment” resulting from the action, and ways to mitigate each significant effect. Significance is defined as “Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project (14 CCR § 15382).” CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a “fair argument” can be made that a “substantial adverse change in physical conditions” would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and its varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts based on their location and the effect of the potential impact on the resource as a whole in the project area. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a “less than significant” determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered “significant.”

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study (IS). CEQA also allows for a “mitigated negative declaration” (MND) in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project’s environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in

implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)). Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370).

Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered “mitigation” under CEQA, these measures are often referred to in an Initial Study as “mitigation”, Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (CAL. PUB. RES. CODE § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

No Build Alternative

For each of the following CEQA questions, the “No Build” alternative has been determined to have "No Impact". Under the “No Build” alternative, no alterations to the existing conditions would occur, nor would any proposed improvements be implemented. The “No Build” alternative is not discussed further in this document.

2.1. Aesthetics

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?				✓
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
Would the project: 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?			✓	
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

“No Impact and “Less Than Significant” determinations in this section are based on the scope, description and location of the proposed project and a Visual Impact Assessment completed May 29, 2020.

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] § 21001[b]).

Environmental Setting

The project is located along northbound U.S. Highway 101, just north of SR 299 and within the City of Arcata in Humboldt County. Arcata is located in northern California on Humboldt Bay and has a population of 17,000. This section of Arcata is separate from Arcata proper and is a triangular piece of land within the confines of SR 299, U.S. 101, and the Mad River. Highway 101 is a four lane freeway with a grassy median and guardrail separating the two directions of travel. The project is not within an officially designated scenic highway. The landscape is characterized by residences, motels, and small businesses directly adjacent to and east of the proposed lane extension.

There are two major viewer groups for the project: highway travelers and highway neighbors. Highway travelers include local traffic, tourists, and commercial drivers. It is anticipated that the average viewer sensitivity of travelers would be moderate due to the short duration of exposure to the project corridor. Highway neighbors include residences, a school, motels, local health services, and a fast food restaurant. Residents and the school are in close proximity to the highway and are living and working there on a daily basis. Therefore, these viewers experience a long duration of time at the location. Motel users are of a transitory nature and the length of time they are in the area is short. It is anticipated that the average viewer sensitivity of neighbors is moderate-high.

Visual impacts include both temporary and permanent impacts. Comparing the existing visual character and visual quality of the project corridor with the proposed project, it has been determined there will be an overall negative moderate visual impact. Avoidance and minimization measures designed and implemented with the concurrence of the District Landscape Architect would help reduce the potential visual impact of the project. Recommended measures include the use of a natural permanent stain on rocks and concrete to reduce contrast, leaving planting holes within the rock area at the base of the retaining wall to allow for trees or shrubs to provide screening, replacing vegetation within the Caltrans right of way, and protecting trees and shrubs not required to be removed for installation of the security fence. The measures would reduce the urbanizing effect of the project caused primarily by the removal of vegetation.

See below for further discussion of the “Less Than Significant Impact” determination made for *Aesthetics*—Question c).

Discussion of Environmental Evaluation Question 2.1 Question c)—Aesthetics

- c) ***In non-urbanized areas, would the project 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?***

Views to and from the highway would be altered by the proposed project. Neighbors and highway users would be affected by the proposed project due to removal of vegetation along the property line. However, the visual character of the proposed project would be compatible with the existing visual character of the site and its surroundings. Therefore, the impact would be less than significant.

During construction neighbors and travelers would have views of construction and traffic control equipment and material related to roadway construction. These temporary visual impacts are part of the general construction landscape and would not have lasting effects. Therefore, the impact would be less than significant.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.2. Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department 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 (CAL FIRE) 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.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
Would the project: b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
Would the project: c) Conflict with existing zoning, 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))?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
Would the project: 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Agriculture and Forest Resources are not anticipated as the scope of the project does not include rezoning, agricultural, forest, or timber resources.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.3. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
Would the project: 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?				✓
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?				✓
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Energy Analysis dated February 28, 2020. The project area is in attainment for federal and state criteria pollutants, transportation conformity requirements do not apply to this project. The project would not cause an increase in operational emissions. Temporary and short-term emissions to the immediate area surrounding the construction site could potentially result from construction activities that increase traffic congestion in the area. Fugitive dust would be generated during grading and construction operations.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.4. Biological Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?				✓
Would the project: 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 Wildlife or U.S. Fish and Wildlife Service?				✓
Would the project: c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
Would the project: 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?				✓
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Natural Environment Study (NES) dated January 10, 2020. Potential impacts to wetlands, federally listed species or critical habitat are not anticipated as no wetlands or habitat were discovered within the project limits or construction areas.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.5. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				✓
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				✓
Would the project: c) Disturb any human remains, including those interred outside of dedicated cemeteries?				✓

“No Impact” determinations in this section are based on the scope, location, and description of the proposed project. Native American consultation revealed concerns about the project area being sensitive for cultural resources. A geoarchaeological investigation would be completed within the project footprint to determine absence or presence of cultural resources. At this time, it is anticipated that the geoarchaeological testing would find that cultural resources are not present in the project area, and therefore, the project would have no impacts to historical properties. An Extended Phase I geoarchaeological investigation as well as archaeological monitoring during the geotechnical investigation for the project will be used to determine absence or presence of resources. If the geoarchaeological investigation reveals cultural resources, then further investigation would be needed.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.6. Energy

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?				✓
Would the project: b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Air Quality and Energy Analysis dated February 28, 2020. Potential impacts to energy use are not anticipated. The project would not result in an inefficient, wasteful, and unnecessary consumption of energy and is unlikely to increase energy consumption through increased fuel usage.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.7. Geology and Soils

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. 				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
Would the project: 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?				✓
Would the project: 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?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The project area does not show signs of substantial erosion or landslide activity; there is no evidence that would indicate high rates of erosion, slope failures, or unstable geology within the project limits. No paleontological resources or unique geologic features have been identified in the project area.

Mitigation Measures—Geology and Soils

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

Mitigation Measures—Paleontological Resources

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.8. Greenhouse Gas Emissions

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

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.

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 greenhouse gas 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 (CARB) 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. CARB 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 CARB 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 CARB, 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 CARB to update the *Climate Change Scoping Plan* to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO₂e).¹ 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.

¹ 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.

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 traveled 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 CARB 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 CARB 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 is located in a rural area near the northern limits of the city of Arcata. The project location is zoned primarily Medium and High Density Residential with Commercial Visitor Servicing. Lands to the west are zoned Public Trust and Agricultural Exclusive. U.S. Highway 101 is the main transportation route to and through the area for both passenger and commercial vehicles. Traffic counts are low throughout the project limits and U.S. Highway 101 is rarely congested in this location. The nearest alternate route is SR 299 East, which can be accessed just south of the project limits. An additional alternate route, SR 200, can be accessed approximately 1.5 miles north of Giuntoli Lane exit. State Route 200 connects to SR 299 approximately 2.0 miles east of the project location.

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 CARB does so for the state, as required by Health and Safety Code § 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 (Figure 2). 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 (U.S. EPA 2018). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

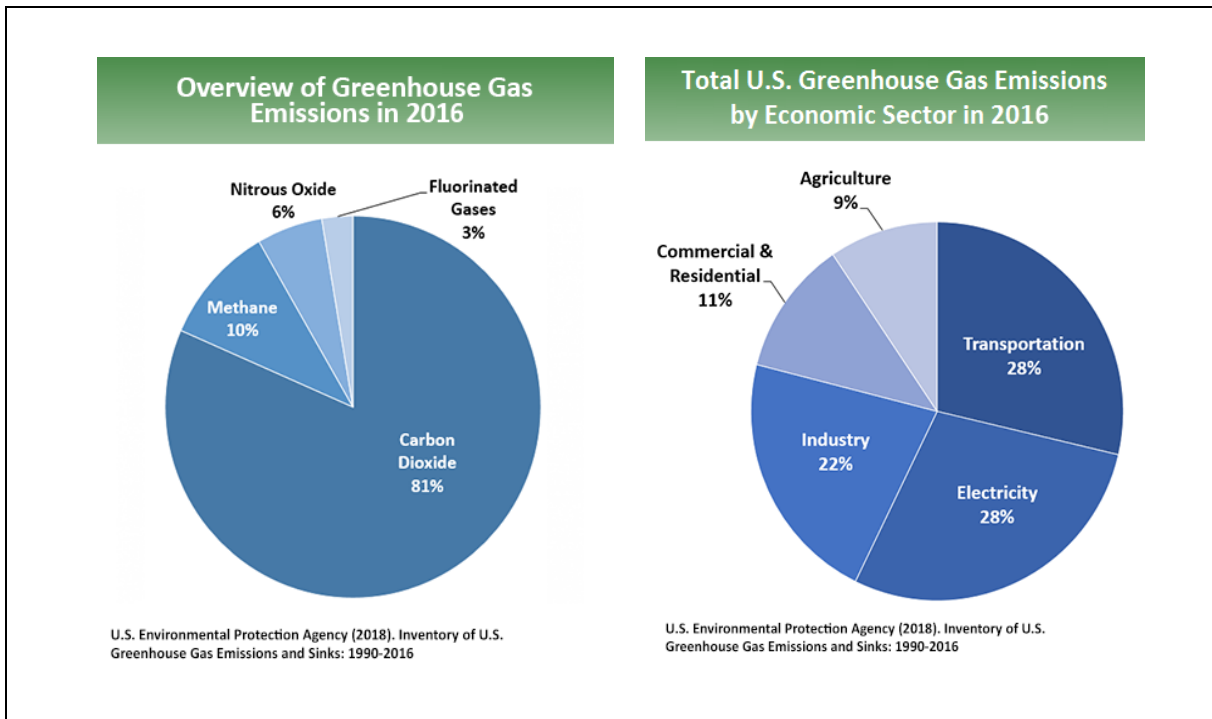


Figure 2. U.S. 2016 Greenhouse Gas Emissions

STATE GHG INVENTORY

CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year (Figure 3) (CARB 2019a). 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 (Figure 4) (CARB 2019b).

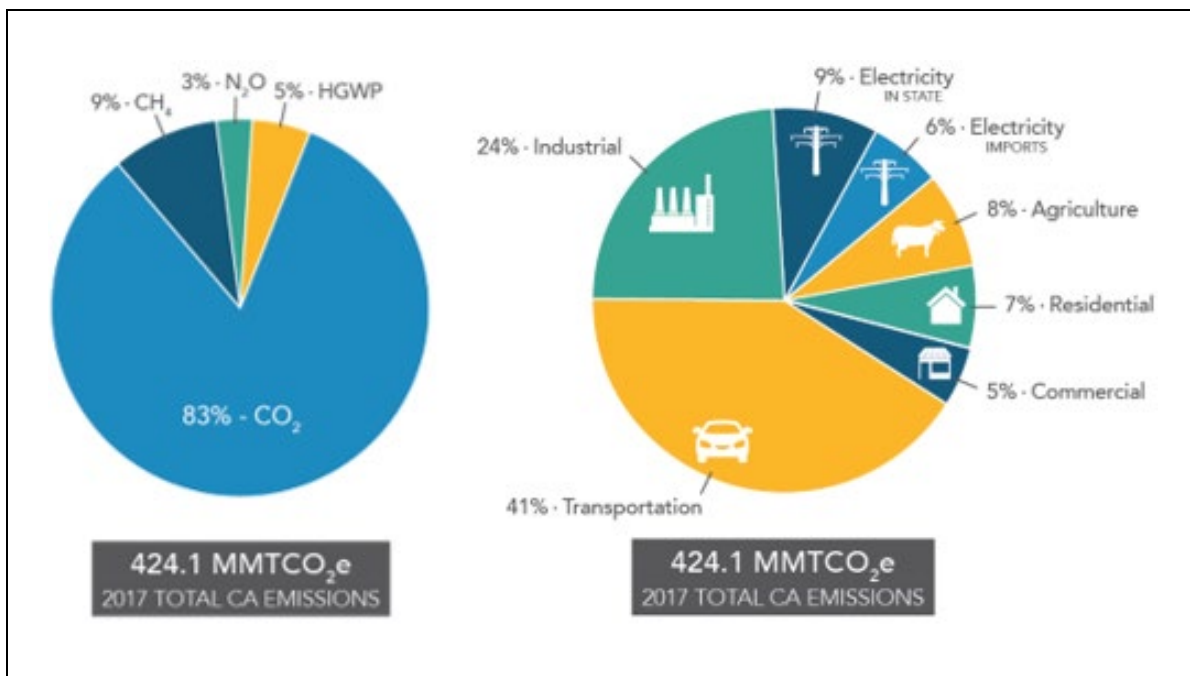


Figure 3. California 2017 GHG Emissions (Source CARB 2019a)

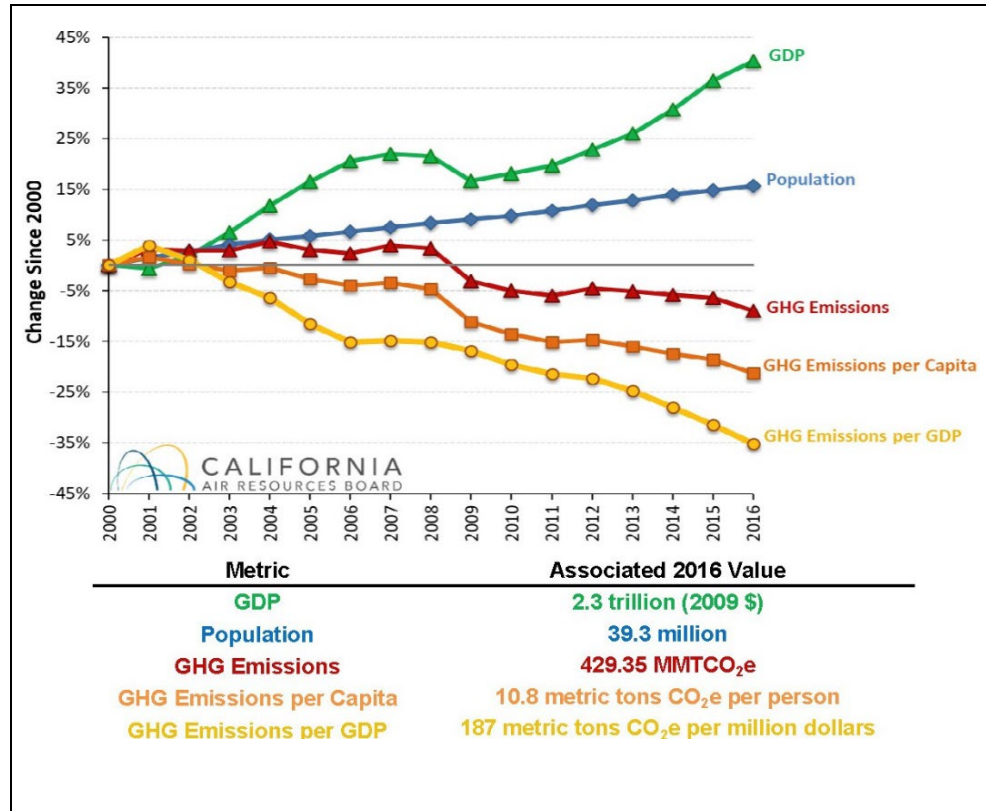


Figure 4. Change in California GDP, Population, and GHG Emissions Since 2000

(Source: CARB 2019b)

AB 32 required CARB 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. CARB 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

The proposed project is within the jurisdiction of the Humboldt County Regional Transportation Planning Agency (RTPA). The 2017 Regional Transportation Plan (RTP) (pages 10-3 through 10-5) identifies objectives aimed at reducing greenhouse gas emissions contributed by transportation. The following objectives and climate policy goals have been developed to accomplish reduction of GHG emissions from transportation:

Objective: Balanced Mode Share/Complete Streets Objective

- Promote viable, safe, affordable, and easily accessible multimodal options.
- POLICY CLIMATE-1: Put forth strategies that shift travel to be more transit-focused and rideshare-oriented, to achieve more road safety benefits. (CTP 2040 recommendation)

Objective: Efficient & Viable Transportation System

- Reduce motor vehicle miles traveled (VMT) and lower GHG emissions.

Objective: Environmental Stewardship

- Accelerate the use of alternative fuels, new vehicle technology, pricing strategies, public transportation expansion, more bicycling and walking to contribute to GHG reduction goals. (CTP 2040 recommendation)
- POLICY C-2 Promote active transportation, ridesharing, rail, and public/mass transit promoting policies for the co-benefit of reducing air pollution when they replace motor vehicle trips. (CTP 2040 recommendation).

Objective: Equitable & Sustainable Use of Resources

- Recognize the connections between transportation and land use.
- POLICY C-3 Support local communities in developing integrated transportation and land use strategies for responding resiliently to climate change, and codifying such strategies in General Plans, Regional Transportation Plans, and Local Coastal Programs. (CTP 2040 recommendation)
- POLICY C-4 HCAOG will support and plan transportation and projects that provide safe and convenient travel modes for people who cannot or choose not to drive.
- POLICY C-5 HCAOG will promote and support land use policies that accommodate or reinforce planning, designing, and building a truly multimodal transportation network.
- POLICY C-6 HCAOG shall encourage partnerships to develop adaptation strategies that address sea-level rise in Humboldt County.

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (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 improve merging movements from westbound SR 299 onto northbound US Highway 101 and to reduce merging impacts to northbound traffic on US 101. The project would not increase the vehicle capacity of the roadway and would not change travel demands or traffic patterns when compared to the no-build alternative. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on U.S. Highway 101 or SR 299, 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 would 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 Caltrans Construction Emission Tool (CAL-CET2018 version 1.3) was used to estimate average carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs) emissions from construction activities. Table 1 summarizes estimates of GHG emissions during the proposed construction period for the project. The carbon dioxide equivalent (CO_{2e}) produced during construction is estimated to be 167 metric tons.

Table 1. Estimated GHG Emissions during extension (US tons) of entrance ramp

Construction Year	CO ₂	CH ₄	N ₂ O	HFCs	CO _{2e} *
2020	85	0.003	0.005	0.003	130.956
2021	21	0.001	0.002	0.001	36.421
Total	106	0.004	0.007	0.004	167.386

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_{2e}) that can be estimated by the sum after multiplying each amount of CO₂, CH₄, N₂O, and HFCs by its global warming potential (GWP). Each GWP of CO₂, CH₄, N₂O, and HFCs is 1, 25, 298, and 14,800, respectively.

All construction contracts include Caltrans Standard Specifications Sections 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 CARB 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.

CEQA Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated 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 greenhouse gases. 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 (Figure 5) 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*.

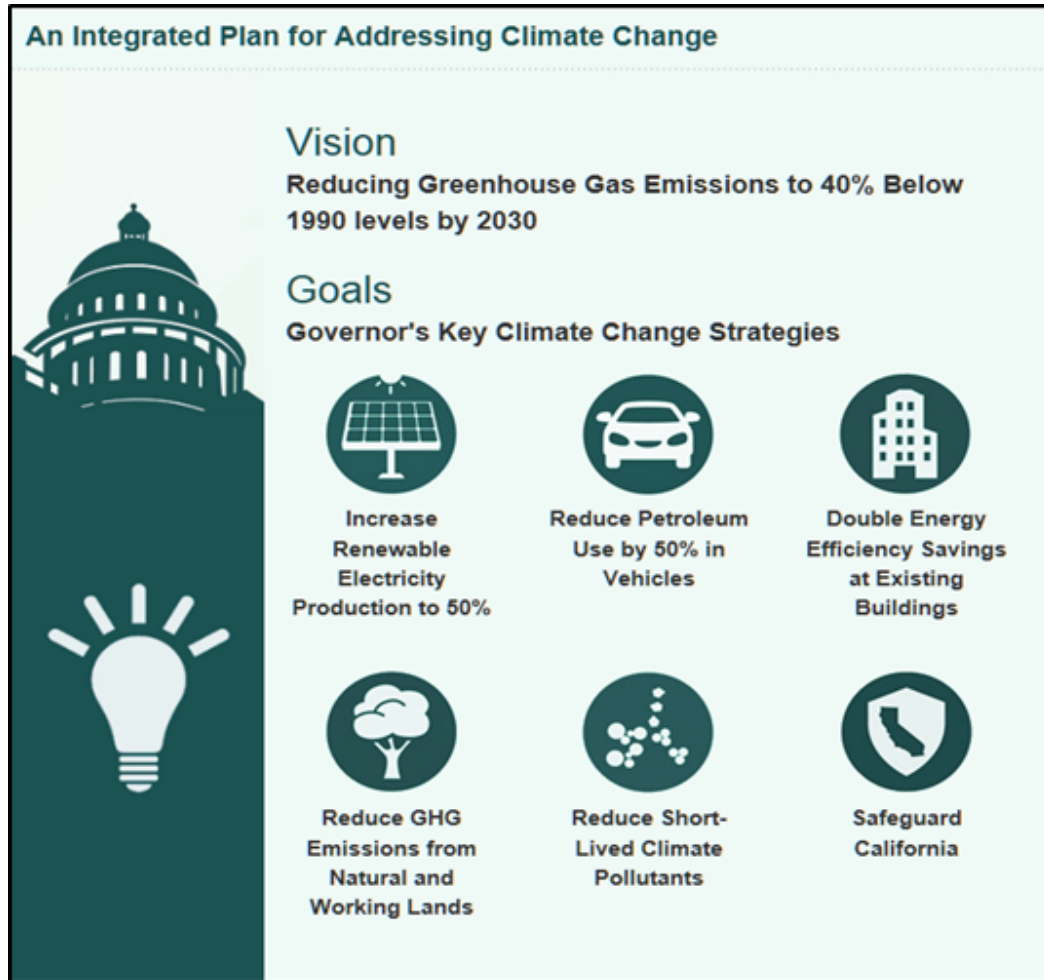


Figure 5. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital 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 CARB 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 established 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 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 GREENHOUSE GAS REDUCTION STRATEGIES

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

Construction Emissions Reduction Measures

- The construction contractor must comply with the 2018 Caltrans Standard Specifications in Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including the North Coast Unified Air Quality Management District regulations and local ordinances.

- Compliance with Title 13 of the California Code of Regulations, which includes idling restrictions of construction vehicles and equipment to no more than 5 minutes.
- Caltrans 2018 Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board.
- Utilize a traffic management plan to minimize vehicle delays.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- Schedule truck trips outside of peak morning and evening commute hours.
- Reduce construction waste and maximize the use of recycled materials (reduces consumption of raw materials, reduces landfill waste, and encourages cost savings).
- Incorporate measures to reduce consumption of potable water.

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 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).

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 latest 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 factors. 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 (SLR) 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 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 Efforts

Sea-Level Rise

The proposed project is outside the Coastal Zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected. The project elevation is approximately 30 feet above sea level and is shown to be located outside of an area that could be affected by as much as 6 feet of sea level rise using the NOAA Sea Level Rise Tool (Figure #6).

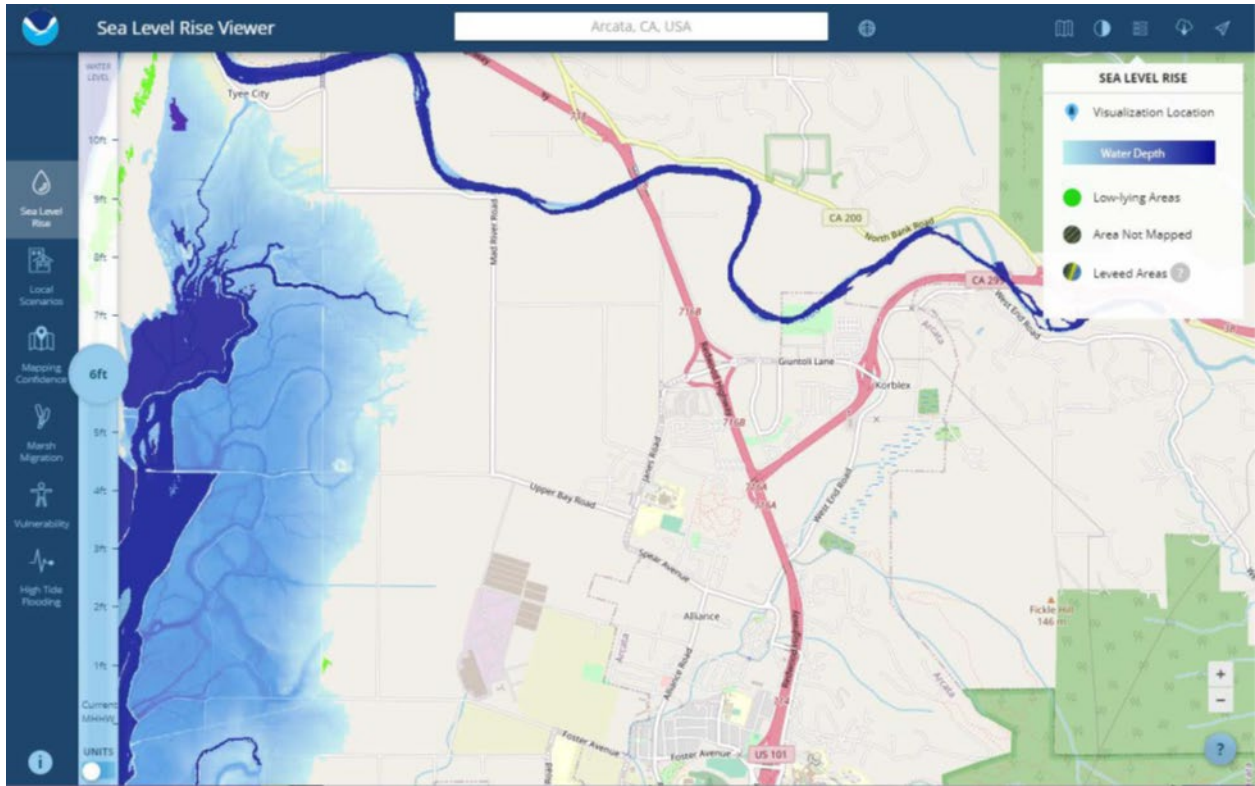


Figure 6. NOAA Sea Level Rise Tool showing project area

Floodplains

A 100-year design standard is often applied in the design of transportation facilities and is cited as a design consideration in the Caltrans Highway Design Manual. The Caltrans Climate Change Vulnerability Assessment for District 1 (Caltrans 2019) notes that “the 100-year storm depth is expected to increase by anywhere from 0 to 19.9% over the coming century in District 1.” It anticipates heavier rainfall during storm events. Precipitation mapping in the Climate Vulnerability Assessment shows 100-year storm precipitation depth in the project area is expected to increase by up to 9.9% from historical conditions by 2025 and through 2085.

The project limits lie outside the 100-year and 500-year floodplain, therefore would not be subject to damage from higher floodwaters in waterbodies. The project would create a minimal amount of new impervious surface and would not result in increased flood risk. Stormwater generated from the roadway collects east of U.S. 101 within Caltrans right of way and infiltrates in a swale that runs parallel to U.S. 101.

Wildfire

The project location has been assessed for vulnerability to wildfire using CAL FIRE's Fire Hazard Severity Zone map. The project location is in an urban area and is not designated as vulnerable to wildfire. Furthermore, the Caltrans District 1 Climate Change Vulnerability mapping tool shows the project area is not considered to be exposed roadway (Figure 7). Caltrans 2018 revised Standard Specification 7-1.02M(2) mandates fire prevention procedures during construction, including a fire prevention plan. The project would not impair emergency response vehicles or emergency evacuation. The project would not result in changes to the highway facilities or environment that could exacerbate wildfire risk.

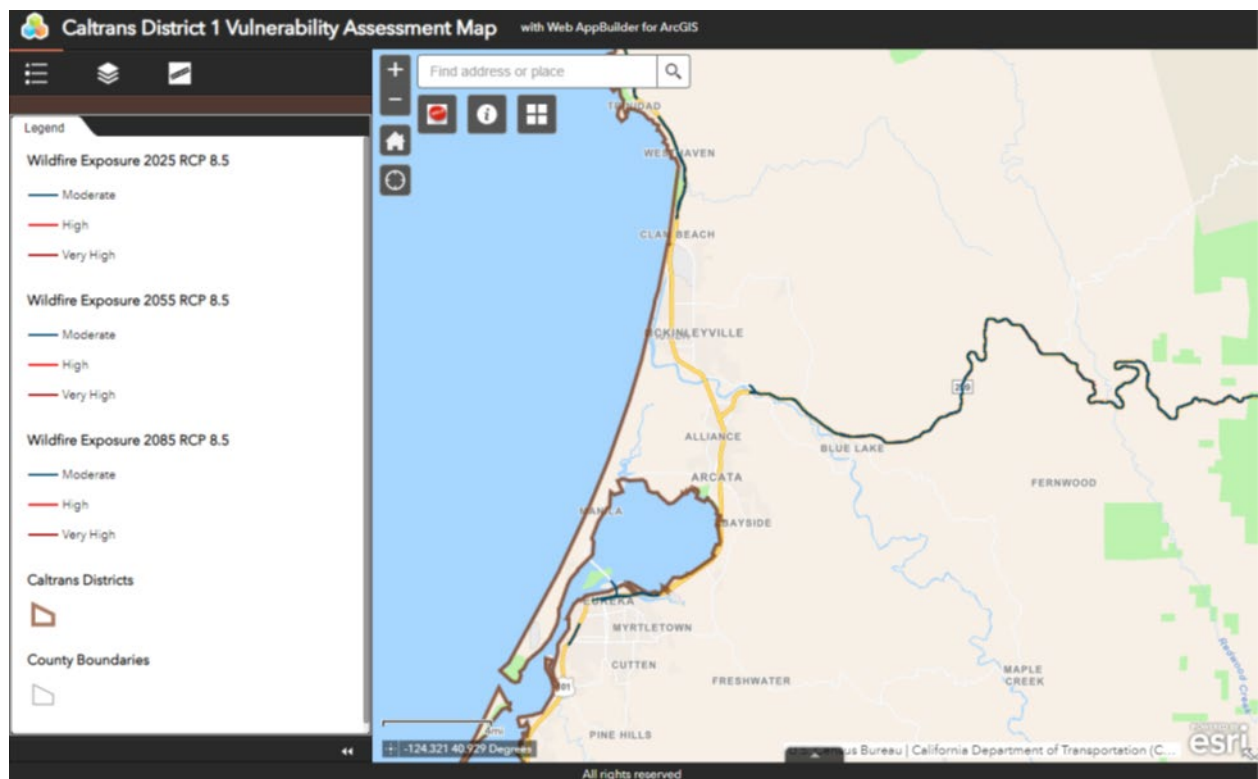


Figure 7. Caltrans District 1 Climate Change Mapping Tool

2.9. Hazards and Hazardous Materials

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
Would the project: 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?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Would the project: 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?				✓
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Initial Site Assessment dated September 19, 2019. The proposed project does not involve the routine transport of hazardous materials and would not create a new source of hazardous material or hazardous emissions, affect emergency response, or create a public safety hazard.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.10. Hydrology and Water Quality

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				✓
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: 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;				✓
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;				✓
(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				✓
(iv) impede or redirect flood flows?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Water Quality Assessment Exemption dated November 13, 2019. The proposed project is expected to result in no long-term impacts to water quality.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.11. Land Use and Planning

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?				✓
Would the project: 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Land Use and Planning are not anticipated as the proposed project would not conflict with established land use planning and is consistent with existing zoning.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.12. Mineral Resources

Question:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
Would the project: 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Mineral Resources are not anticipated.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.13. Noise

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in: 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?				✓
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
Would the project result in: 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?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Environmental Impact Assessment–Traffic Noise dated November 22, 2019. This project meets criteria for a Type III project as defined in 23 CFR 772. Noise impacts are not anticipated, and abatement was not considered on this project. Potential impacts from Noise are not anticipated because construction noise would be short-term, intermittent, and overshadowed by local traffic noise.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.14. Population and Housing

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: 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)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Population and Housing are not anticipated as the project does not involve activities that would directly or indirectly affect population growth or housing.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.15. Public Services

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Public Services are not anticipated as the project would not alter or result in the need for new facilities or impact the ability to maintain acceptable service, response times or performance objectives for any public services.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.16. Recreation

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. The project area does not include recreational facilities and would not increase the use of any existing nearby recreational facilities, therefore potential impacts to Recreation are not anticipated.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.17. Transportation/Traffic

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

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Transportation/Traffic are not anticipated as the proposed project would not affect traffic and circulation. No public transit agency facilities are within one-half mile of proposed project.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.18. Tribal Cultural Resources

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<p>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:</p> <p>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</p>				✓
<p>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.</p>				✓

Caltrans anticipates a “No Impact” determination in this section based on the scope, description, and location of the proposed project, as well as the results of the archaeological survey, soil characterization, and the records search with the Northwest Information Center.

Native American Consultation has been ongoing, and a geoarchaeological investigation is pending, the results of which will determine if there are any impacts.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.19. Utilities and Service Systems

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?				✓
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				✓
Would the project: 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?				✓
Would the project: 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?				✓

Question	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Utilities and Service Systems are not anticipated as the project would not create new sources of wastewater or solid waste and no significant changes would occur to existing stormwater facilities.

Mitigation Measures

Based on the determinations made in the CEQA Checklist, mitigation measures have not been proposed for the project.

2.20. Mandatory Findings of Significance

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

The project does not occur in an area where sensitive resources are present, therefore the project does not have the potential to degrade the quality of the environment or substantially reduce habitat or cause species to drop below self-sustaining levels. The incremental effect of the project is not cumulatively considerable. The scope of the project does not include any significant direct, indirect, or cumulative impact on any resource nor do any other current or planned projects within the project area.

Based on the description of the proposed project and consideration of potential effects the project would not cause substantial adverse effects on human beings, either directly or indirectly.

2.21. Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA, § 15355).

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

Per § 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "...situations where the cumulative effects are found to be significant." An EIR is required in all situations when a project might result in a "significant" direct, indirect, or cumulative impact on any resource. The analysis indicates the activities associated with the geotechnical investigation do not have the potential to have a direct, indirect, or cumulative impact on any resource. Given this, an EIR and CIA were not required for this project.



Chapter 3. Agency and Public Coordination

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

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

Coordination with Resource Agencies

Initial formal notification to representatives of the Wiyot, Cher' AeHeights of the Trinidad Rancheria, Big Lagoon Rancheria, Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, Hoopa Valley Tribe and the Yurok Tribe took place in late January 2019 (Table 2).

Table 2. Agency Coordination and Professional Contacts

Date	Personnel	Notes
January 24, 2019	M. Espino, Caltrans Archaeologist	Caltrans initiated formal notification with the Bear River Band of the Rohnerville Rancheria
January 29, 2019	M. Espino, Caltrans Archaeologist	Caltrans initiated formal notification with the Wiyot Tribe
January 30, 2019	M. Espino, Caltrans Archaeologist	Caltrans initiated formal notification with Big Lagoon Rancheria, Blue Lake Rancheria, Yurok Tribe, Hoopa Valley Tribe, and Cher'Ae Heights of the Trinidad Rancheria

Date	Personnel	Notes
October 28, 2019	L. Embree, Caltrans Biologist	Caltrans requested and received the California Native Plant Society Electronic Inventory and CDFW California Natural Diversity Database lists for the project area.
December 11, 2019	L. Embree, Caltrans Biologist	Caltrans requested and received a species list from USFWS for the project area.

Coordination with Property Owners

After circulation of this draft document, and review and response to any public comments received, the project development team will decide how to move forward with the proposed project.

Chapter 4. List of Preparers

The following individuals contributed to the preparation of the Initial Study/Proposed Negative Declaration.

California Department of Transportation, District 1

Alex Arevalo	Transportation Engineer, NPDES Coordinator <i>Water Quality Assessment Exemption, November 13, 2019</i>
Christian Figueroa	Hazardous Waste Specialist <i>Initial Site Assessment, September 19, 2019</i>
Felicia Zimmerman	Environmental Planner <i>Project Coordinator and Document Preparer</i>
Jason Meyer	Senior Environmental Planner <i>Environmental Branch Chief</i>
Laura Lazzarotto	Landscape Architect <i>Visual Impact Assessment, May 29, 2020</i>
Lisa Embree	Biologist <i>Natural Environment Study, January 10, 2020</i>
Saeid Zandian-Jazi	Noise Specialist <i>Environmental Impact Assessment-Traffic Noise, Nov. 22, 2019</i>
Tina Fulton	Archaeologist <i>Extended Phase I Geoarchaeological Investigation, Pending</i>
Youngil Cho	Air Specialist <i>Air Quality and Energy Analysis, February 28, 2020</i>

Chapter 5. Distribution List

Regional/County/Local Agencies

City of Arcata
736 F Street
Arcata, CA 95521

County Clerk's Office, Humboldt County
825 5th Street
Eureka, CA 95502

Interested Groups, Organizations and Individuals

Wiyot Tribe
1000 Wiyot Drive
Loleta, CA 95551

Utilities, Service Systems, Businesses, and Other Property Owners

Villa De Valle Homeowner's Association, Inc
PO Box 2393
McKinleyville, CA 95519

Charlene June Lundblade
PO Box 224
Salyer, CA 95563

American Hospital Management Corporation
PO Box 1116
Arcata, CA 95518

Kevin McKenny
PO Box 115
Cutten, CA 95534

Jai Jalaram Bapa Investment, LLC
4701 Valley West Blvd
Arcata, CA 95521

G6 Hospitality LLC CO
PO Box 117508
Carrollton, TX 75011

Sarti Rohnert Park LLC
2386 Maritime Dr. Ste. 100
Elk Grove, CA 95758

Abyssnia Me Inc.
4887 Valley West Blvd
Arcata, CA 95521

Michael & Audrey Bode
1452 Walker Point Rd
Bayside, CA 95524

Laurel Tree Charter School
4555 Valley West Blvd
Arcata, CA 95521

Chapter 6. References

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Appendix A. Title VI Policy Statement



DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



*Making Conservation
a California Way of Life.*

November 2019

**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, remedies, 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, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:
<https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi>.

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, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

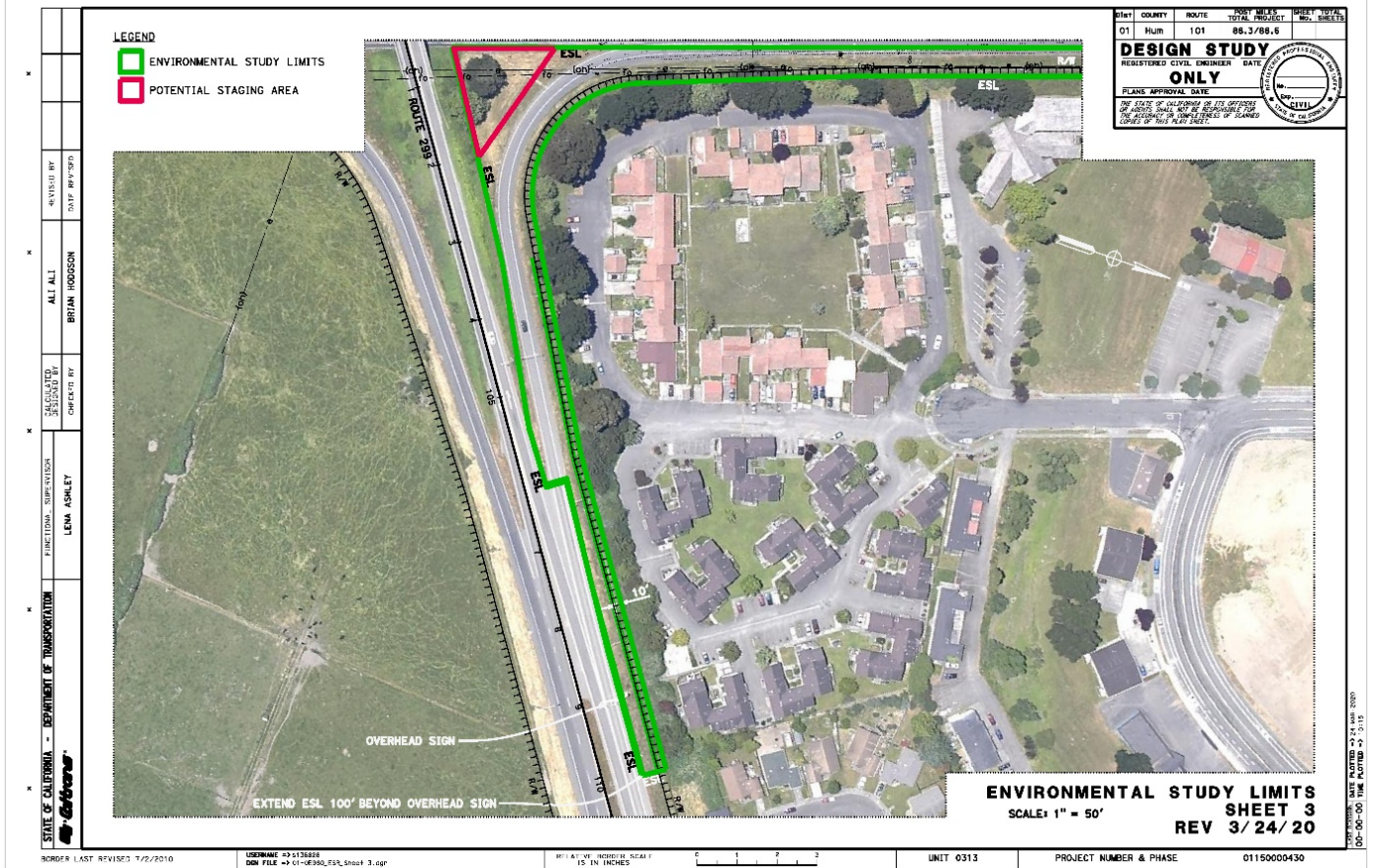
A blue ink signature of Toks Omishakin, consisting of a stylized 'T' followed by a series of loops and a horizontal line.

Toks Omishakin
Director

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



Appendix B. Project Layouts





Appendix C. USFWS, CDFW/CNDDB and CNPS Species Lists

Appendix C



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

Phone: (707) 822-7201 Fax: (707) 822-8411



In Reply Refer To:
Consultation Code: 08EACT00-2019-SLI-0338
Event Code: 08EACT00-2020-E-00182
Project Name: 0E890 Arcata Auxillary Lane

December 11, 2019

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

Arcata Fish And Wildlife Office

1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2019-SLI-0338

Event Code: 08EACT00-2020-E-00182

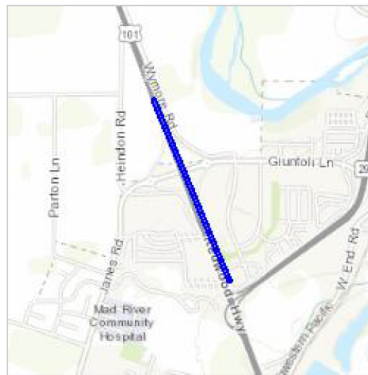
Project Name: 0E890 Arcata Auxillary Lane

Project Type: TRANSPORTATION

Project Description: Construct auxillary lane on US 101

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.90339311977895N124.08611297607423W>



Counties: Humboldt, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

NAME	STATUS
Fisher <i>Pekania pennanti</i>	Proposed
Population: West coast DPS	Threatened
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/3651	

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

Fishes

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

Flowering Plants

NAME	STATUS
Beach Layia <i>Layia carnosa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6728	Endangered
Menzies' Wallflower <i>Erysimum menziesii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2935	Endangered
Western Lily <i>Lilium occidentale</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/998	Endangered

Critical habitats

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



Appendix B
Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad> IS (Arcata North (4012481))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	PDNYC010N4	None	None	G4G5T2	S2	1B.1
<i>Apodontia rufa humboldtiana</i> Humboldt mountain beaver	AMAF01017	None	None	G5TNR	SNR	
<i>Arborimus pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Ascaphus truei</i> Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<i>Carex arcta</i> northern clustered sedge	PMCYP030X0	None	None	G5	S1	2B.2
<i>Carex lyngbyei</i> Lyngbye's sedge	PMCYP037Y0	None	None	G5	S3	2B.2
<i>Castilleja ambigua</i> var. <i>humboldtensis</i> Humboldt Bay owl's-clover	PDSCR0D402	None	None	G4T2	S2	1B.2
<i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Entosphenus tridentatus</i> Pacific lamprey	AFBAA02100	None	None	G4	S4	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
<i>Lathyrus japonicus</i> seaside pea	PDFAB250C0	None	None	G5	S2	2B.1
<i>Lilium occidentale</i> western lily	PMLIL1A0G0	Endangered	Endangered	G1	S1	1B.1
<i>Lycopodium clavatum</i> running-pine	PPLYC01080	None	None	G5	S3	4.1
<i>Margaritifera falcata</i> western pearlshell	IMBIV27020	None	None	G4G5	S1S2	



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Montia howellii</i> Howell's montia	PDPOR05070	None	None	G3G4	S2	2B.2
<i>Myotis evotis</i> long-eared myotis	AMACC01070	None	None	G5	S3	
<i>Oenothera wolfii</i> Wolf's evening-primrose	PDONA0C1K0	None	None	G2	S1	1B.1
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	AFCHA0208A	None	None	G4T4	S3	SSC
<i>Oncorhynchus kisutch</i> pop. 2 coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	G4T2Q	S2?	
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Pekania pennanti</i> fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
<i>Rana aurora</i> northern red-legged frog	AAABH01021	None	None	G4	S3	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rhyacotriton variegatus</i> southern torrent salamander	AAAAJ01020	None	None	G3G4	S2S3	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<i>Sidalcea malviflora</i> ssp. <i>patula</i> Siskiyou checkerbloom	PDMAL110F9	None	None	G5T2	S2	1B.2
<i>Sidalcea oregana</i> ssp. <i>eximia</i> coast checkerbloom	PDMAL110K9	None	None	G5T1	S1	1B.2
<i>Thaleichthys pacificus</i> eulachon	AFCHB04010	Threatened	None	G5	S3	
<i>Trichodon cylindricus</i> cylindrical trichodon	NBMUS7N020	None	None	G4	S2	2B.2

Record Count: 36

Appendix A

CNPS Inventory of Rare and Endangered Plants						
Status: Plant Press Manager window with 48 items - Mon, Oct. 28, 2019 12:40 ET c						
Reformat list as: Standard List - with Plant Press controls ▼						
ECOLOGICAL REPORT						
scientific	family	life form	blooming	communities	elevation	CNPS
<u>Abronia umbellata</u> <u>var. breviflora</u>	Nyctaginaceae	perennial herb	Jun-Oct	•Coastal dunes (CoDns)	0 - 10 meters	List 1B.1
<u>Astragalus pycnostachyus</u> var. <u>pycnostachyus</u>	Fabaceae	perennial herb	(Apr), Jun-Oct Months in parentheses are uncommon.	•Coastal dunes (CoDns) (mesic) •Coastal scrub (CoScr) •Marshes and swamps (MshSw)(coastal salt, streamsides)	0 - 30 meters	List 1B.2
<u>Astragalus umbraticus</u>	Fabaceae	perennial herb	May-Aug	•Cismontane woodland (CmWld) •Lower montane coniferous forest (LCFrS)/sometimes roadside	150 - 1250 meters	List 2B.3
<u>Bryoria pseudocapillaris</u>	Parmeliaceae	fruticose lichen epiphytic	•Coastal dunes (CoDns)(SLO Co.) •North Coast coniferous forest (NCFrS)(immediate coast)/Usually on conifers	0 - 90 meters	List 3.2	
<u>Bryoria spiralifera</u>	Parmeliaceae	fruticose lichen epiphytic	•North Coast coniferous forest (NCFrS)(immediate coast)/Usually on conifers	0 - 30 meters	List 1B.1	
<u>Cardamine angulata</u>	Brassicaceae	perennial herb	(Jan), Mar-Jul Months in parentheses are uncommon.	•Lower montane coniferous forest (LCFrS) •North Coast coniferous forest (NCFrS)/Wet areas, streambanks	25 - 915 meters	List 2B.2
<u>Carex arcta</u>	Cyperaceae	perennial herb	Jun-Sep	•Bogs and fens (BgFns) •North Coast coniferous forest (NCFrS)(mesic)	60 - 1400 meters	List 2B.2

<http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/BasketShowx?format=1&editable=1>

10/28/2019

				•Coastal bluff scrub (CBScr)(soil, on clay banks)		
<u>Empetrum nigrum</u>	Empetraceae	perennial evergreen shrub	Apr-Jun	•Coastal bluff scrub (CBScr) •Coastal prairie (CoPrr)	10 - 200 meters	List 2B.2
<u>Erigeron bloomeri</u> <u>var. nudatus</u>	Asteraceae	perennial herb	Jun-Jul	•Lower montane coniferous forest (LCFRs) •Upper montane coniferous forest (UCFRs)/serpentine	600 - 2300 meters	List 2B.3
<u>Erysimum menziesii</u>	Brassicaceae	perennial herb	Mar-Sep	•Coastal dunes (CoDns)	0 - 35 meters	List 1B.1
<u>Erythronium oregonum</u>	Liliaceae	perennial herb	Mar-Jun(Jul), Months in parentheses are uncommon.	•Cismontane woodland (CmWld) •Meadows and seeps (Medws)/sometimes serpentine, rocky, openings	100 - 1150 meters	List 2B.2
<u>Erythronium revolutum</u>	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug), Months in parentheses are uncommon.	•Bogs and fens (BgFns) •Broadleaved upland forest (BUFrs) •North Coast coniferous forest (NCFrs)/Mesic, streambanks	0 - 1600 meters	List 2B.2
<u>Fissidens pauperculus</u>	Fissidentaceae	moss	•North Coast coniferous forest (NCFrs)(damp coastal soil)	10 - 1024 meters	List 1B.2	
<u>Gilia capitata</u> ssp. <u>pacifica</u>	Polemoniaceae	annual herb	Apr-Aug	•Coastal bluff scrub (CBScr) •Chaparral (Chprl) (openings) •Coastal prairie (CoPrr) •Valley and foothill grassland (VFGrs)	5 - 1665 meters	List 1B.2
<u>Gilia millefoliata</u>	Polemoniaceae	annual herb	Apr-Jul	•Coastal dunes (CoDns)	2 - 30 meters	List 1B.2
<u>Hesperis matronalis</u> var. <u>brevifolia</u>	Asteraceae	annual herb	Mar-Jun	•Coastal bluff scrub (CBScr)(sandy) •Coastal dunes (CoDns) •Coastal prairie (CoPrr)	0 - 215 meters	List 1B.2

<u>Carex lenticularis</u> var. <u>limnophila</u>	Cyperaceae	perennial herb	Jun-Aug	•Bogs and fens (BgFns) •Marshes and swamps (MshSw) •North Coast coniferous forest (NCFrs)/shores, beaches; often gravelly	0 - 6 meters	List 2B.2
<u>Carex leptalea</u>	Cyperaceae	perennial rhizomatous herb	Mar-Jul	•Bogs and fens (BgFns) •Meadows and seeps (Medws)(mesic) •Marshes and swamps (MshSw)	0 - 700 meters	List 2B.2
<u>Carex lynxbyei</u>	Cyperaceae	perennial rhizomatous herb	Apr-Aug	•Marshes and swamps (MshSw)(brackish or freshwater)	0 - 10 meters	List 2B.2
<u>Carex praticola</u>	Cyperaceae	perennial herb	May-Jul	•Meadows and seeps (Medws)(mesic)	0 - 3200 meters	List 2B.2
<u>Carex viridula</u> ssp. <u>viridula</u>	Cyperaceae	perennial herb	(Jun), Jul-Sep(Nov), Months in parentheses are uncommon.	•Bogs and fens (BgFns) •Marshes and swamps (MshSw)(freshwater) •North Coast coniferous forest (NCFrs)(mesic)	0 - 1600 meters	List 2B.3
<u>Castilleja ambigua</u> var. <u>humboldtensis</u>	Orobanchaceae	annual herb hemiparasitic	Apr-Aug	•Marshes and swamps (MshSw)(coastal salt)	0 - 3 meters	List 1B.2
<u>Castilleja litoralis</u>	Orobanchaceae	perennial herb hemiparasitic	Jun	•Coastal bluff scrub (CBScr) •Coastal dunes (CoDns) •Coastal scrub (CoScr)/sandy	15 - 100 meters	List 2B.2
<u>Castilleja mendocinensis</u>	Orobanchaceae	perennial herb hemiparasitic	Apr-Aug	•Coastal bluff scrub (CBScr) •Closed-cone coniferous forest (CCFrs) •Coastal dunes (CoDns) •Coastal prairie (CoPrr) •Coastal scrub (CoScr)	0 - 160 meters	List 1B.2
<u>Chloropyron maritimum</u> ssp. <u>palustre</u>	Orobanchaceae	annual herb hemiparasitic	Jun-Oct	•Marshes and swamps (MshSw)(coastal salt)	0 - 10 meters	List 1B.2
<u>Collinsia corymbosa</u>	Plantaginaceae	annual herb	Apr-Jun	•Coastal dunes (CoDns)	0 - 20 meters	List 1B.2
<u>Discelium nudum</u>	Disceiaceae	ephemeral moss		10 - 50 meters		List 2B.2

<u>Juncus nevadensis</u> <u>var. inventus</u>	Juncaceae	perennial rhizomatous herb	Jul-Nov	•Bogs and fens (BgFns)	0 - 10 meters	List 2B.2
<u>Lasthenia</u> <u>californica ssp.</u> <u>macrantha</u>	Asteraceae	perennial herb	Jan-Nov	•Coastal bluff scrub (CBScr) •Coastal dunes (CoDns) •Coastal scrub (CoScr)	5 - 520 meters	List 1B.2
<u>Lathyrus japonicus</u>	Fabaceae	perennial rhizomatous herb	May-Aug	•Coastal dunes (CoDns)	1 - 30 meters	List 2B.1
<u>Lathyrus palustris</u>	Fabaceae	perennial herb	Mar-Aug	•Bogs and fens (BgFns) •Coastal prairie (CoPrr) •Coastal scrub (CoScr) •Lower montane coniferous forest (LCFrs) •Marshes and swamps (MshSw) •North Coast coniferous forest (NCFrs)/mesic	1 - 100 meters	List 2B.2
<u>Lavia carnosa</u>	Asteraceae	annual herb	Mar-Jul	•Coastal dunes (CoDns) •Coastal scrub (CoScr) (sandy)	0 - 60 meters	List 1B.1
<u>Lilium occidentale</u>	Liliaceae	perennial bulbiferous herb	Jun-Jul	•Bogs and fens (BgFns) •Coastal bluff scrub (CBScr) •Coastal prairie (CoPrr) •Coastal scrub (CoScr) •Marshes and swamps (MshSw)(freshwater) •North Coast coniferous forest (NCFrs)(openings)	2 - 185 meters	List 1B.1
<u>Lycopodiella</u> <u>inundata</u>	Lycopodiaceae	perennial rhizomatous herb	Jun-Sep	•Bogs and fens (BgFns) (coastal) •Lower montane coniferous forest (LCFrs)(mesic) •Marshes and swamps (MshSw)(lake margins)	5 - 1000 meters	List 2B.2
<u>Monotropa uniflora</u>	Ericaceae	perennial herb achlorophyllous	Jun-Aug(Sep), Months in parentheses are uncommon.	•Broadleaved upland forest (BUFRs) •North Coast coniferous forest (NCFrs)	10 - 550 meters	List 2B.2
<u>Montia howellii</u>	Montiaceae	annual herb	(Feb), Mar-May Months in parentheses are uncommon.	•Meadows and seeps (Medws) •North Coast coniferous	0 - 835 meters	List 2B.2

				forest (NCFrs) •Vernal pools (VnPls)/vernally mesic, sometimes roadsides		
<u>Oenothera wolfii</u>	Onagraceae	perennial herb	May-Oct	•Coastal bluff scrub (CBScr) •Coastal dunes (CoDns) •Coastal prairie (CoPrr) •Lower montane coniferous forest (LCFrs)/sandy, usually mesic	3 - 800 meters	List 1B.1
<u>Packera bolanderi</u> <u>var. bolanderi</u>	Asteraceae	perennial rhizomatous herb	(Jan),(Feb),(Apr),May- Jul(Aug), Months in parentheses are uncommon.	•Coastal scrub (CoScr) •North Coast coniferous forest (NCFrs)/Sometimes roadsides	30 - 650 meters	List 2B.2
<u>Piperia candida</u>	Orchidaceae	perennial herb	(Mar), May-Sep Months in parentheses are uncommon.	•Broadleaved upland forest (BUFrs) •Lower montane coniferous forest (LCFrs) •North Coast coniferous forest (NCFrs)/sometimes serpentinite	30 - 1310 meters	List 1B.2
<u>Polemonium</u> <u>carneum</u>	Polemoniaceae	perennial herb	Apr-Sep	•Coastal prairie (CoPrr) •Coastal scrub (CoScr) •Lower montane coniferous forest (LCFrs)	0 - 1830 meters	List 2B.2
<u>Romanzoffia tracyi</u>	Hydrophyllaceae	perennial herb	Mar-May	•Coastal bluff scrub (CBScr) •Coastal scrub (CoScr)/rocky	15 - 30 meters	List 2B.3
<u>Sidalcea malviflora</u> <u>ssp. patula</u>	Malvaceae	perennial rhizomatous herb	May-Aug	•Coastal bluff scrub (CBScr) •Coastal prairie (CoPrr) •North Coast coniferous forest (NCFrs)/often roadcuts	15 - 880 meters	List 1B.2
<u>Sidalcea oregana</u> <u>ssp. eximia</u>	Malvaceae	perennial herb	Jun-Aug	•Lower montane coniferous forest (LCFrs) •Meadows and seeps (Medws) •North Coast coniferous forest (NCFrs)	5 - 1340 meters	List 1B.2

<u>Silene scouleri</u> ssp. <u>scouleri</u>	Caryophyllaceae	perennial herb	(Mar), (May), Jun-Aug (Sep), Months in parentheses are uncommon.	•Coastal bluff scrub (CBScr) •Coastal prairie (CoPrr) •Valley and foothill grassland (VFGrs)	0 - 600 meters	List 2B.2
<u>Spergularia canadensis</u> var. <u>occidentalis</u>	Caryophyllaceae	annual herb	Jun-Aug	•Marshes and swamps (MshSw)(coastal salt)	0 - 3 meters	List 2B.1
<u>Tiarella trifoliata</u> var. <u>trifoliata</u>	Saxifragaceae	perennial rhizomatous herb	(May), Jun-Aug Months in parentheses are uncommon.	•Lower montane coniferous forest (LCFRs) •North Coast coniferous forest (NCFr)/edges, moist shady banks, streambanks	170 - 1500 meters	List 3.2
<u>Trichodon cylindricus</u>	Ditrichaceae	moss	•Broadleaved upland forest (BUFrs) •Meadows and seeps (Medws) •Upper montane coniferous forest (UCFRs)/sandy, exposed soil, roadbanks	50 - 2002 meters	List 2B.2	
<u>Viola palustris</u>	Violaceae	perennial rhizomatous herb	Mar-Aug	•Bogs and fens (BgFns) (coastal) •Coastal scrub (CoScr) (mesic)	0 - 150 meters	List 2B.2

