

**Environmentally Sensitive Habitat Area  
Assessment  
for the Fort Bragg Americans with  
Disabilities Act Improvement Project**



**01-MEN-1 (Post Miles 59.80 to 62.10)**

**EA 01-0B220 / EFIS 0112000110**

*October 2020*




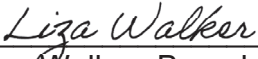
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STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**October 2020**

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# Chapter 1. Introduction

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This Environmentally Sensitive Habitat Area (ESHA) Assessment was conducted as a condition of the California Coastal Act and the City of Fort Bragg Coastal Zoning Code for the proposed Fort Bragg Americans with Disabilities Act (ADA) Improvement Project (project). The purpose of this assessment is to analyze the results of previous biological studies in context with the Fort Bragg Local Coastal Plan (City of Fort Bragg 2008) and the California Coastal Act.

This report summarizes information gathered from previously conducted surveys for the project as well as investigations conducted solely for the purpose of this ESHA Assessment, including reviewing special-status species, sensitive natural communities, wetlands and other sensitive resources that meet the definition of ESHA as defined by the Fort Bragg LCP.

## 1.1 Regulatory Background

Under Section 17.71.045.D.4 of the City of Fort Bragg’s Coastal Land Use and Development Code (CLUDC), “an inventory of the plant and animal species present on the project site, or those known or expected to be present on the project site at other times of the year, prepared by a qualified biologist or resource expert” shall be provided as part of a Coastal Development Permit Application package. Furthermore, “Where the initial site inventory indicates the presence or potential for sensitive species or environmentally sensitive habitat on the project site, the submittal of a detailed biological report of the site is required, consistent with the requirements of Section 17.50.050” (City of Fort Bragg 2018).

Section 17.50.050 of the CLUDC outlines the requirements for “the protection and enhancement of environmentally sensitive habitat areas (ESHAs), when development is proposed adjacent to, or within environmentally sensitive habitat areas.”

Under Element 04: *Conservation, Open Space, Energy and Parks* of the Fort Bragg Coastal General Plan, an ESHA is defined as follows:

*“Environmentally sensitive habitat area” means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could*

*be easily disturbed or degraded by human activities and developments”*  
(City of Fort Bragg 2008).

Policy Open Space (OS)-1.1 continues to describe EHSAs known to occur locally “including, but not limited to, portions of coastal bluffs, biologically rich tide pools, nesting grounds, kelp beds, wetlands, riparian habitats, and rare, threatened, or endangered plants or plant communities (Fort Bragg 2008). Map OS-1 (Appendix A: Figure 2) delineates known ESHA in the Fort Bragg area, but is not an exhaustive map (City of Fort Bragg 2008). Furthermore, Policy OS-1.2 includes the following areas as ESHA:

- Any habitat area that is rare or especially valuable because of their special nature or role in an ecosystem and is easily degraded or disturbed by human activities or developments.
- Any habitat area of plant or animal species designated as rare, threatened, or endangered under state or federal law.
- Any habitat area of species designated as Fully Protected or Species of Special Concern under State law or regulations.
- Any habitat area of plant species for which there is compelling evidence of rarity, for example, those designated by the California Native Plant Society as 1B (Rare or endangered in California and elsewhere) or 2 (rare, threatened or endangered in California but more common elsewhere).



## 1.2 Project Description

The project would upgrade a section of State Route (SR) 1 to current ADA standards from post miles 59.80 to 62.10 in the city of Fort Bragg, Mendocino County, California (Appendix A). This project is included in the ADA Compliance Program of the State Highway Operation and Protection Program (SHOPP). The project limits would begin at the intersection of SR 20 north to Elm Street, with a gap in work along the Noyo River Bridge. This project is needed to address ADA deficiencies and to comply with conditions of the 2010 ADA lawsuit settlement. This segment of SR 1 within the city of Fort Bragg was identified as a priority location for ADA upgrades due to its urban nature, traffic volumes, and pedestrian traffic. Based on the current project description described below, Caltrans has determined this action would not affect special-status taxa, sensitive natural communities, wetlands, jurisdictional waters, essential fish habitat or federally designated critical habitat (Appendix D).

There is currently one alternative for the proposed project. To bring this location of SR 1 to current ADA standards, the scope of work would entail reconstructing 1,384 linear feet of sidewalk, installing 1,100 linear feet of new sidewalk, constructing 37 curb ramps, installing a new 741 linear foot retaining wall, performing associated drainage inlet and culvert work, and placing pavement markings at specified locations (see Appendix B for Project Plans and Drainage Plans). The proposed retaining wall would be approximately 10 feet tall at its highest point near SR 20 and would reduce in height moving north. The retaining wall would be approximately 1 foot wide with a concrete footing that would be 7 feet wide and 1.25 feet deep. The maximum depth of excavation is estimated to be 3 feet from the finished grade. The various project work locations total approximately 2.3 miles of construction.

This project will require Temporary Construction Easements (TCEs) for 30 properties. As of August 2020, Caltrans has obtained 15 TCEs and will be working toward obtaining the remaining 15 TCEs.

### ***Project Equipment List***

The following equipment would be utilized to perform the various construction activities: bulldozer, excavator, saw cutter, slip form paving machine, concrete mixer, and support trucks.

### ***Project Construction Scenario***

To meet the scope of the project, the following steps would be completed:

#### ***1) Construction of retaining wall, curbs, gutters, and sidewalks***

- Prepare the existing subgrade by removing the base material to a depth of three to six inches below the subgrade elevation.
- Backfill the subgrade with earth, sand, or gravel to produce a stable foundation.
- Apply water to the subgrade and compact it before placing concrete.
- Short segments of the curb would be placed using the fixed form method with temporary form work.
- Long segments of the curb would be placed using extrusion (i.e., concrete is pushed through a mold through an auger (extruder) and slip molding. The slip form paving machine would be operated in the closed traffic lane, along with a concrete truck.
- Construct the new sidewalk, retaining wall, curb, and gutters.

#### ***2) Reconstructing curb ramps and driveways***

- Saw-cut the existing sidewalk.
- Remove the existing curb ramp or driveway.
- Prepare the existing subgrade by removing the base material to a depth of three to six inches below the subgrade elevation.
- Backfill the subgrade with earth, sand, or gravel to produce a stable foundation.
- Apply water to the subgrade and compact it before placing concrete.
- Construct the new curb ramp or driveway.

### **3) Construction of new drainage inlets and culverts**

- Saw-cut and remove the existing pavement.
- Excavate a trench to the required grade.
- Install the drainage grate or the CSP culvert with a lifting crane.
- Backfill the trench with required material.

The installation of new sidewalks, driveways, and the retaining wall would require minor clearing and grubbing of soil and vegetation. Staging is anticipated to utilize existing paved shoulders and developed gravel turnouts. Temporary traffic control would be used, as required for safety, consisting of portable delineators and traffic signs for a single lane closure for all phases of the project. Temporary traffic control would be removed after project activities are complete. High visibility crosswalk pavement markings would be placed throughout the project limits. Excess material would be disposed of at an appropriate disposal site per Caltrans Standard Specifications.

### **1.3 Project Features, Standard Measures, and Best Management Practices**

To comply with several state and federal laws, Caltrans implements standard measures during construction. These standard measures and Best Management Practices (BMPs) are identified in Caltrans Standard Specifications, Standard Special Provisions, other manuals, or may otherwise be standard business practices. The following standard measures and BMPs would be included as part of the project:

- Vehicles and equipment would be inspected daily at the project site for leaks and spills.
- Measures would be in place to prevent construction equipment effluents from contaminating soil or waters in the construction site, such as absorbent pads.
- Maintenance and fueling of construction equipment and vehicles would occur at least 50 feet away from the ordinary high-water mark (OHWM) of surface water or the edge of sensitive habitats (e.g., wetlands).
- The contractor would be required to develop and implement site-specific BMPs and emergency spill controls.
- Water in contact with setting concrete would be pumped into a tank truck and disposed at an approved disposal site or settling basin.

- All unused material from the project would be disposed off-site. The Caltrans Resident Engineer would be responsible for ensuring all requirements for disposal of material are met by the contractor.
- If an active nest is located, the biologist would coordinate with 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.

## Chapter 2. Study Methods

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### 2.1. Previous Studies

A biological resources evaluation was conducted in years 2019 and 2020 for the project (Caltrans 2020). A Biological Resources Evaluation Memo was prepared to summarize these studies and should be referenced in conjunction with this ESHA Assessment (Appendix D; Caltrans 2020).

Prior to conducting field visits, regional lists of special-status wildlife and plant species were created by querying the following databases:

- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2020).
- National Marine Fisheries Service (NMFS) Species List Tools for the Fort Bragg quadrangle (NMFS 2020).
- California Natural Diversity Database (CNDDDB), California Department of Fish and Wildlife Species Database for the following USGS 7.5-minute quadrangles: Fort Bragg, Inglenook, Dutchman’s Knoll, Noyo Hill, Mathison Peak, and Mendocino (CDFW 2020).
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for the following USGS 7.5-minute quadrangles: Fort Bragg, Inglenook, Dutchman’s Knoll, Noyo Hill, Mathison Peak, and Mendocino (CNPS 2020).
- The USFWS National Wetlands Inventory (NWI) database was reviewed to determine if documented wetlands exist within the project environmental study limits (ESL) (USFWS 2019).

The results of these queries, except for the NWI database, can be found in Appendices E, F, G, and H, of the Biological Resources Evaluation Memo (Appendix D; Caltrans 2020). The Biological Resources Evaluation Memo provides a table of listed and proposed species, as well as natural communities and critical habitats potentially occurring in the project area.

Field surveys were conducted to assess habitats and identify potential sensitive biological resources. Rare plant surveys and wetland investigations were conducted by Caltrans biologists Tracy Walker, Jeremy Pohlman, Reed Crane, Eric Rulison, Dawn Graydon, and Annie Allen on May 10, 2019, June 13, 2019, and July 31, 2019. Host plant surveys and habitat assessment for the Behren's silverspot butterfly (BSSB) (*Speyeria zerene behrensii*) and lotis blue butterfly (LBB) (*Lycaeides argyrognomon lotis*) were conducted by Caltrans biologists Dawn Graydon and Tracy Walker on March 22, 2019, and May 10, 2019.

## **2.2. Environmentally Sensitive Habitat Areas Methods**

Field surveys for ESHAs were conducted within the project area and within a 100-foot buffer around the Environmental Study Limits (ESL) to ensure all potential ESHAs were captured in the Assessment. The Fort Bragg 2018 USGS 7.5-minute quadrangle map was examined for any potential mapped streams within the project limits (USGS 2018). Additionally, maps of the ESL and buffer were compared to Map OS-1 (Appendix A, Figure 2) to determine whether the project overlapped with any existing, documented ESHAs.

## Chapter 3. Results

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Per Section 17.71.045.D.4 of the City of Fort Bragg’s CLUDC, “where the initial site inventory indicates the presence of potential for sensitive species or environmentally sensitive habitat on the project site, the submittal of a detailed biological report of the site is required, consistent with the requirements of Section 17.50.050” of the CLUDC. Section 17.50.050 “provides requirements for the protection and enhancement of ESHAs, when development is proposed *adjacent to*, or *within* environmentally sensitive habitat areas” (City of Fort Bragg 2018).

### 3.1. Potential Environmentally Sensitive Habitat Areas and Impacts

For the proposed project, one area containing potential riparian and/or wetland ESHA was identified outside of the ESL, but within the 100-foot buffer (Appendix A, Figure 4). The potential forested, seasonally flooded wetland and/or riparian area occurs along the western side of SR 1 beyond an existing wooden fence from PMs 60.86 to PM 61.12. It should be noted that the potential ESHA was not identified on Map OS-1 (Appendix A, Figure 2) or on the NWI surface waters and wetlands map.

The nearest proposed construction would involve curb ramp reconstruction, sidewalk removal and replacement, drainage inlet construction, and culvert extensions (to connect existing culverts to proposed drainage inlets) on the eastern side of the highway as shown in Layout Sheets 9, 10, 11, and 12 (Appendix B). All proposed construction would occur approximately 80–100 feet away from this potential ESHA. Furthermore, proposed construction activities would not encroach on the existing buffer between the ESHA and existing development.

Additionally, the existing drainage patterns would not be modified as part of the proposed project. As noted in the 2019 Water Quality Assessment for the Fort Bragg ADA Improvement Project, any “increase in rate and volume of stormwater flow associated with [an] increase in NIS [(new impervious surface)] is not anticipated to result in any adverse modification” (Caltrans 2019).

The Water Quality Assessment also found that “inclusion of appropriate temporary and permanent BMPs...will avoid potential impacts to water quality and meet the requirements of Caltrans NPDES Permit...” (Caltrans 2019).

Temporary high visibility fencing (THVF) would not be necessary to ensure protection to the potential ESHA because there is an existing wooden fence that already isolates this area from the developed roadway. Furthermore, no construction or staging is proposed on the western side of the highway near the potential ESHA.



## Chapter 4. Conclusion

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Caltrans biologists have determined that the potential ESHA does not warrant further study or discussion since there is no potential for impacts to the ESHA as a result of the proposed construction activities. The only new development proposed as part of this project is the retaining wall shown in Appendix B (Layout Sheets 1 and 2). Construction of the retaining wall would not impact any potential ESHA. As described earlier in Chapter 3 of this Assessment, construction and reconstruction of sidewalks, drainage inlets, curb ramps, and culverts is not anticipated to impact the potential ESHA, nor would it infringe on the existing buffer between the existing development and the ESHA.

As noted in 17.50.050 of the City of Fort Bragg's CLUDC, a detailed biological resources report should be included in the LCDP application package "when development is proposed *adjacent to* or *within* environmentally sensitive habitat areas" (Fort Bragg 2018). Caltrans has determined that "a detailed biological resources report" would not be required for this LCDP application because the proposed construction activities are not "adjacent to or within" the potential ESHAs identified during field surveys within the 100-foot buffer. Furthermore, the existing buffer includes five lanes of existing SR 1 highway, the shoulder, and an existing wooden fence. This buffer would not be encroached on or reduced by proposed construction activities. Because the existing buffer would not be impacted, reduced, or encroached on, a reduced buffer analysis, as pointed out in Section 17.50.050.B.2.i and OS-1.9, is not warranted in this case.

The contents of this ESHA Assessment, in conjunction with the Biological Resources Evaluation Memo, should sufficiently demonstrate compliance with Sections 17.50.050 and 17.71.045 of the City of Fort Bragg's LCDP.



## Chapter 5. References

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California Department of Fish and Wildlife (CDFW). 2020. *California Natural Diversity Database (CNDDDB) List for USGS 7.5-minute Quadrangles: Fort Bragg, Inglenook, Dutchman's Knoll, Noyo Hill, Mathison Peak, and Mendocino*. <https://wildlife.ca.gov/Data/CNDDDB>. Retrieved: January 14, 2020. Last updated: August 14, 2020.

California Department of Transportation (Caltrans). 2020. *Biological Resources Evaluation Memo for the Fort Bragg ADA Improvement Project*.

\_\_\_\_\_. 2019. *Water Quality Assessment Memorandum for Fort Bragg ADA Project*.

California Native Plant Society (CNPS). 2020. *Inventory of Rare and Endangered Plants for USGS 7.5-minute Quadrangles: Fort Bragg, Inglenook, Dutchman's Knoll, Noyo Hill, Mathison Peak, and Mendocino*. <http://www.rareplants.cnps.org/>. Retrieved: January 14, 2020. Last updated: August 14, 2020.

City of Fort Bragg. 2018. *Coastal Land Use and Development Code (CLUDC)*.

\_\_\_\_\_. 2008. *Coastal General Plan. Element 04: Conservation, Open Space, Energy, and Parks*.

National Marine Fisheries Service (NMFS). 2020. *Species List Tools for the Fort Bragg Quadrangle*. Google Earth Application. Retrieved: January 14, 2020. Last updated: August 14, 2020.

U.S. Fish and Wildlife Service (USFWS). 2020. Information for Planning and Consultation (IPaC). *List of Endangered Species, Migratory Birds, Facilities, and Wetlands for the Fort Bragg ADA Improvement Project*. <https://ecos.fws.gov/ipac/>. Retrieved: January 14, 2020. Last updated: August 14, 2020.

\_\_\_\_\_. 2019. Publication date (found in metadata). *National Wetlands Inventory (NWI)*. <https://fws.gov/wetlands/nwi/Overview.html>. Retrieved: February 4, 2019.

U.S. Geological Survey (USGS). 2018. *Fort Bragg Quadrangle, California, Mendocino, 7.5-Minute Series*.



## **Appendix A. Project Mapping**

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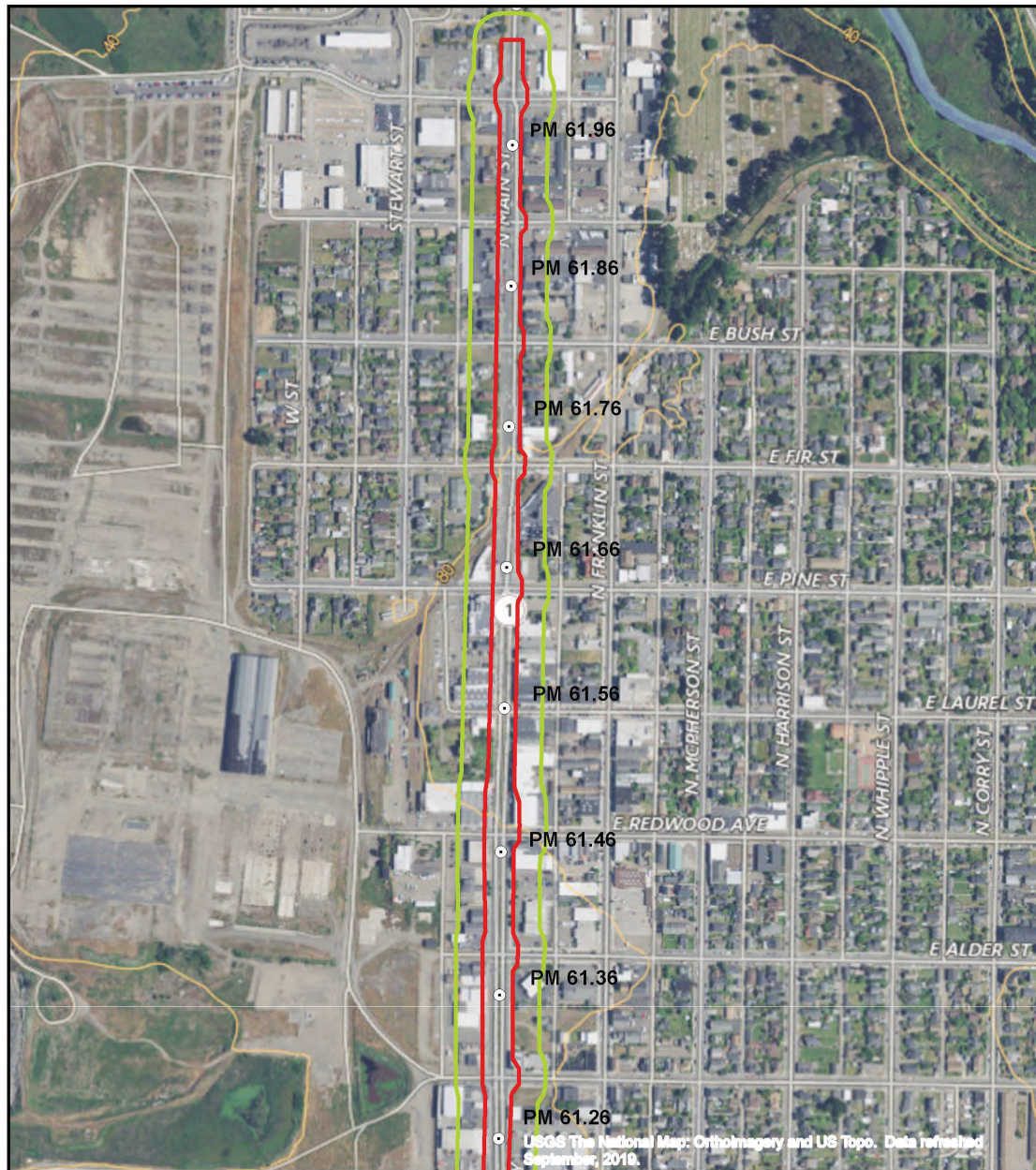


01-MEN-1 59.80-62.10  
Fort Bragg ADA Improvement Project EA: 01-0B220



Figure 1. Vicinity Map

## Fort Bragg ADA Environmental Study Limits (North)



⊙ State Route 1 Post Miles (PMs) 59.80 to 62.10

Environmental Study Limits (ESL)

100 Foot Buffer Surrounding ESL

Map created July 2020

Imagery source: USGS The National Map: Orthoimagery and US Topo (September 2019)

0 250 500 1,000  
Feet



**Figure 2. Fort Bragg ADA Environmental Study Limits (Northern Extent)**



## Fort Bragg ADA Environmental Study Limits (Middle)



- State Route 1 Post Miles (PM) 59.80 to 62.10
- Potential Wetland ESHA
- Potential Riparian ESHA
- Environmental Study Limits (ESL) 100 Foot
- Buffer Surrounding ESL

0    250    500    1,000  
Feet



Map created July 2020  
 Imagery source: USGS The National Map: Orthoimagery and US Topo (September 2019)

**Figure 3. Fort Bragg ADA Environmental Study Limits (Middle Extent)**

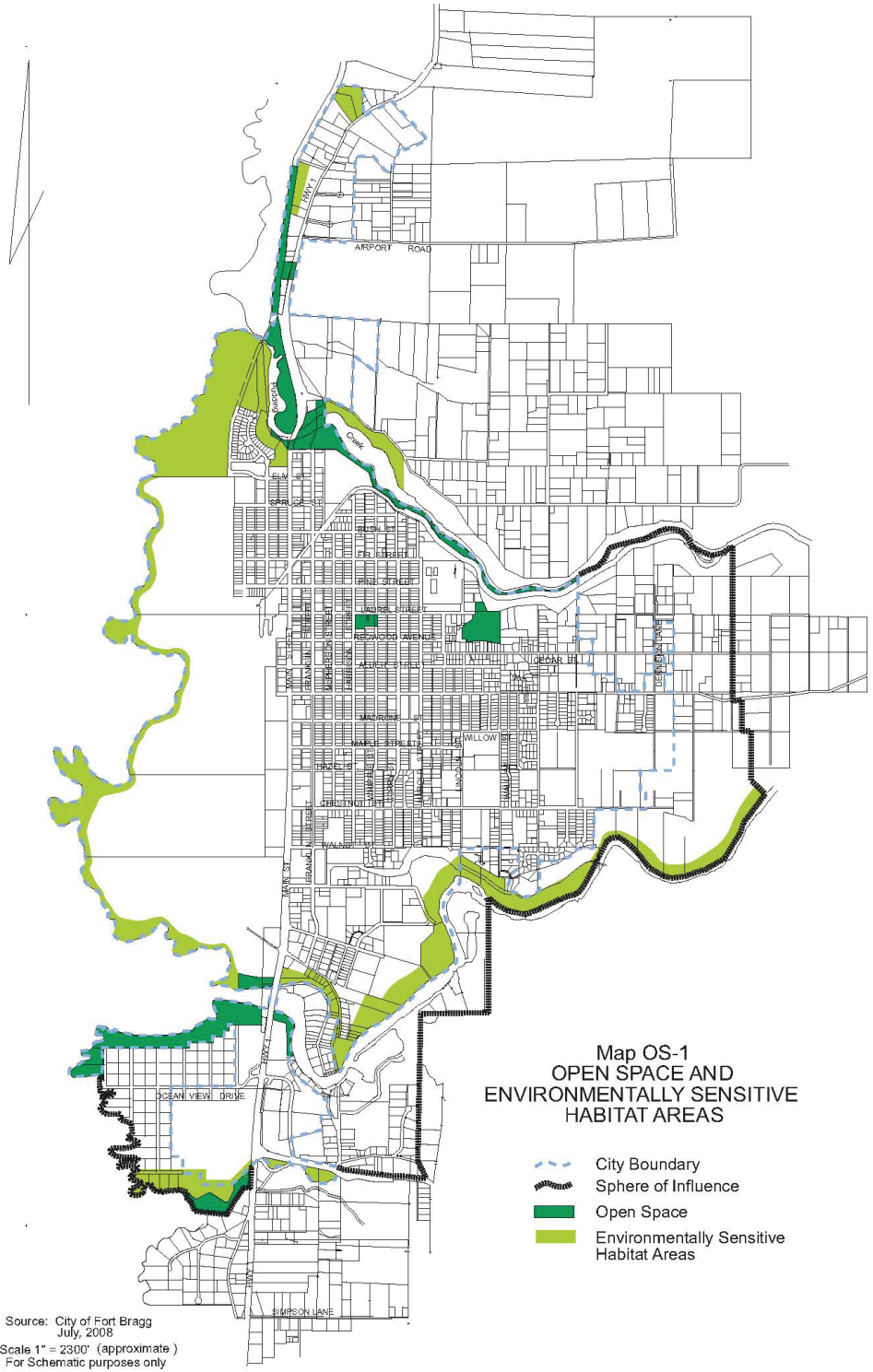
# Fort Bragg ADA Environmental Study Limits (South)



○ State Route 1 Post Miles (PMs) 59.80 to 62.10  
□ Environmental Study Limits (ESL)  
□ 100 Foot Buffer Surrounding ESL

Map created July 2020  
Imagery source: USGS The National Map: Orthoimagery and US Topo (September 2019)

Figure 4. Fort Bragg ADA Environmental Study Limits (Southern Extent)



**Figure 5. Map OS-1: Open Space and Environmentally Sensitive Habitat Areas**

# Memorandum

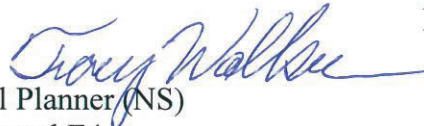
*Making Conservation  
a California Way of Life.*

**To:** Jennifer Gagnon, Coordinator  
Associate Environmental Planner  
North Region Environmental–E4

**Date:** January 31, 2020

**File:** MEN-1/ Post Miles 59.8 - 62.1  
EA 01-0B220  
EFIS No. 0112000110

**From:** Tracy Walker, Biologist  
Associate Environmental Planner (NS)  
North Region Environmental E4



**Subject:** **BIOLOGICAL RESOURCES EVALUATION MEMO – Fort Bragg ADA Improvement Project**

## ***Project Description***

The Fort Bragg Americans with Disabilities Act (ADA) Improvement Project (project) proposes to upgrade a section of State Route (SR) 1 to current ADA standards. This project is in the ADA Compliance Program of the State Highway Operation and Protection Program (SHOPP). It is located on SR 1 in Mendocino County in the city of Fort Bragg (Attachment A), beginning at the intersection of SR 20 north to Elm Street, with a gap in work along the Noyo River Bridge. The proposed scope of work entails replacing and installing retaining walls, curb ramps, sidewalks, driveways, drainage inlets, culverts, and pavement markings at specified locations along SR 1. This project is needed to address ADA deficiencies and comply with conditions of the 2010 ADA lawsuit settlement. This segment of SR 1 within the city of Fort Bragg was identified as a priority location for ADA upgrades due to its urban nature, traffic volumes, and pedestrian traffic. Based on the current project description as described below, Caltrans has determined this action would not affect special-status taxa, sensitive natural communities, wetlands, jurisdictional waters, essential fish habitat or federally designated critical habitat.

There is currently one alternative for the proposed project. This alternative proposes to construct over 35 curb ramps, 0.40 mile of new sidewalks, 0.16 mile of new retaining wall, reconstruct 7 existing driveways, and install 12 new drainage inlets with two of those locations connecting inlets with new culverts. The retaining wall would be approximately 10 feet tall at its highest point near SR 20 and would reduce in height moving north. The wall would be approximately 1' wide with a concrete footing that is 7' wide and 1.25' in depth. The maximum depth of excavation is estimated to be 3' from finished grade. The various project work locations total approximately 2.3 miles of construction (Attachment B).

The new culverts will be 24-inch-diameter corrugated steel pipe (CSP). Staging is anticipated to utilize existing paved shoulders and developed gravel turnouts.

All work would be within the existing Caltrans right of way (ROW). Installation of new sidewalks, driveways, and the retaining wall would involve minor clearing and grubbing of soil and vegetation. The following equipment would be utilized to perform the various construction activities: bulldozer, excavator, saw cutter, slip form paving machine, concrete mixer, and support trucks. The following steps are required to complete the various types of work:

***1) Construction of retaining wall, curbs, gutters, and sidewalks:***

- Set up temporary traffic control consisting of portable delineators and traffic signs for a single lane closure as required for safety.
- Prepare the existing subgrade by removing the base material to a depth of three to six inches below the subgrade elevation.
- Backfill the subgrade with earth, sand, or gravel to produce a stable foundation.
- Apply water to the subgrade and compact it before placing concrete.
- Short segments of the curb would be placed using the fixed form method with temporary form work.
- Long segments of the curb would be placed using extrusion and slip molding. The slip form paving machine would be operated in the closed traffic lane, along with a concrete truck.
- Construct the new sidewalk, retaining wall, curb, and gutters.
- Install high visibility crosswalk and highway pavement markings.
- Remove temporary traffic control.

***2) Reconstructing curb ramps and driveways:***

- Set up temporary traffic control consisting of portable delineators and traffic signs for a single lane closure as required for safety.
- Saw-cut the existing sidewalk.
- Remove the existing curb ramp or driveway.
- Prepare the existing subgrade by removing the base material to a depth of three to six inches below the subgrade elevation.
- Backfill the subgrade with earth, sand, or gravel to produce a stable foundation.
- Apply water to the subgrade and compact it before placing concrete.

- Construct the new curb ramp or driveway.
- Install high visibility crosswalk and highway pavement markings.
- Remove temporary traffic control.

***3) Construction of new drainage inlets and 24-inch-diameter culverts:***

- Set up temporary traffic control consisting of portable delineators and traffic signs for a single lane closure as required for safety.
- Saw-cut and remove the existing pavement.
- Excavate a trench to the required grade.
- Install the drainage grate or the CSP culvert with a lifting crane.
- Backfill the trench with required material.
- Dispose of excess material at an appropriate disposal site per Caltrans Standard Specifications.
- Replace the roadway structural section and install high visibility crosswalk pavement markings.
- Remove temporary traffic control.

***Standard Measures and Best Management Practices (BMPs)***

In compliance with several state and federal laws, Caltrans implements standard measures during construction. These standard measures and Best Management Practices (BMPs) are identified in Caltrans Standard Specifications, Standard Special Provisions, other manuals, or may otherwise be standard business practices. The following standard measures and BMPs would be included as part of the project:

- Equipment would be inspected daily for leaks and completely cleaned of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials prior to operating equipment.
- Measures will be in place to prevent construction equipment effluents from contaminating soil or waters in the construction site, such as absorbent pads.
- Maintenance and fueling of construction equipment and vehicles would occur at least 50 feet away from the ordinary high-water mark (OHWM) of surface water or the edge of sensitive habitats (e.g., wetlands).
- The contractor would be required to develop and implement site-specific BMPs and emergency spill controls.

- Water in contact with setting concrete would be pumped into a tank truck and disposed at an approved disposal site or settling basin.
- All unused material from the project would be disposed off-site. The Caltrans Resident Engineer would be responsible for ensuring all requirements for disposal of material are met by the contractor.
- If bird nests are found incidentally, buffer areas would be established around active nests with input from the California Department of Fish and Wildlife (CDFW). Construction activities that may potentially disturb birds would not occur within the buffer area. The buffer areas would be marked as environmentally sensitive and nests would be monitored for disturbance behaviors by a qualified biologist.

### ***Study Methods***

Regional lists of special status wildlife and plant species were created by querying the following databases:

- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2020) (Attachment E)
- National Marine Fisheries Service (NMFS) Species List Tools (NMFS 2020) (Attachment F)
- California Natural Diversity Database (CNDDDB), California Department of Fish and Wildlife (CDFW 2020) (Attachment G)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2020) (Attachment H)

State and Federal Statutes considered for this evaluation:

- Section 1602 of the CA Fish & Game Code
- Section 401 Water Quality Certification
- Sections 402 and 404 of the Clean Water Act
- Sections 9 and 10 of the Rivers and Harbors Act
- California Coastal Act
- Federal Endangered Species Act
- California Endangered Species Act
- Migratory Bird Treaty Act

- Fish and Wildlife Coordination Act
- Native Plant Protection Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Executive Order 11990, Protection of Wetlands
- Executive Order 12962, Recreational Fisheries
- Executive Order 13112, Invasive Species

CNDDDB and CNPS databases were queried by location using the United States Geological Survey 7.5-minute quadrangles that included *Fort Bragg* (project site), as well as the following five quadrangles that surround the project site: *Inglenook*, *Dutchman's Knoll*, *Noyo Hill*, *Mathison Peak*, and *Mendocino*.

The USFWS National Wetlands Inventory (NWI) database was reviewed to determine if documented wetlands exist within the project ESL (USFWS 2019). To determine habitat types present at the site, the *Jepson Manual: Vascular Plants of California*, site photos taken on December 6, 2018, May 10, 2019, and June 13, 2019, aerial imagery, and road-view images (Google 2018) were used. Due to their status as federally endangered, a habitat assessment for the Behren's silverspot butterfly (BSSB) (*Speyeria zerene behrensii*) and lotis blue butterfly (LBB) (*Lycaeides argyrognomon lotis*) host and plants was conducted by Caltrans biologists Dawn Graydon and Tracy Walker on March 22, 2019, and May 10, 2019. Rare plant surveys and wetland investigations were conducted by Caltrans biologists Tracy Walker, Jeremy Pohlman, Dawn Graydon, and Annie Allen on May 10, 2019, and June 13, 2019.

## ***Resources Evaluated and Effects Findings***

### ***Project Setting***

The project is in the North Coast Range ecoregion (Baldwin 2012) in Mendocino County. The existing environment within the biological study area (BSA) is characterized by open lands dominated by grasses and forbs with interspersed coastal scrub habitat consisting of low shrubs and trees (Attachment D).

The project area along SR 1 and SR 20 within the environmental study limits (ESL) includes managed highway landscaped areas comprising non-native annual grasslands and ornamental trees. To the east of the project is the urban center of Fort Bragg. South of the project ESL



is SR 20, semi-rural industrial areas, and Hare Creek drainage. Most of the land bordering the project to the west is light industrial, including a large parcel owned and operated by Georgia Pacific Company. The Pudding Creek drainage forms the northern boundary of the project area.

### ***Federal and State Listed Species***

A list of special status species and their potential to occur can be found in **Table 1**. While not anticipated to be present within the ESL, the following federally and state *endangered*, *threatened*, or *candidate* plant and wildlife species have been recorded within the project quadrangle and/or the surrounding quadrangles of the project area (see Attachments E and F). There is no essential fish habitat or designated critical habitat within the ESL; therefore, the project would have “*no effect*” on these species or their critical habitat:

- Humboldt County milk-vetch (*Astragalus agicidus*)
- Menzies' wallflower (*Erysimum menziesii*)
- Monterey clover (*Trifolium trichocalyx*)
- Howell's spineflower (*Chorizanthe howellii*)
- Roderick's fritillary (*Fritillaria roderickii*)
- Marbled murrelet (*Brachyramphus marmoratus*)
- Northern spotted owl (*Strix occidentalis caurina*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Western snowy plover (*Charadrius alexandrinus nivosus*)
- California red-legged frog (*Rana draytonii*)
- Tidewater goby (*Eucyclogobius newberryi*)
- Behren's silverspot butterfly (*Speyeria zerene behrensii*)
- Lotis blue butterfly (*Plebejus idas lotis*)
- Western bumble bee (*Bombus occidentalis*)
- Point Arena mountain beaver (*Aplodontia rufa nigra*)
- West Coast Distinct Population Segment (DPS) fisher (*Pekania pennanti*)
- Southern DPS green sturgeon (*Acipenser medirostris*)

- Central California Coast coho salmon Environmentally Significant Unit (ESU) (*Oncorhynchus kisutch*)
- California Coastal Chinook salmon ESU (*Oncorhynchus tshawytscha*)
- Northern California steelhead DPS (*Oncorhynchus mykiss*)

Habitat surveys for the endangered butterfly species conducted in spring of 2019 following the USFWS Draft Guidelines (USFWS 2006) resulted in no *Viola adunca*, *Hosackia gracilis*, or other potential nectar source plants within the ESL or within 330 feet (100 meters) of the project.

Several *federally threatened or endangered* marine and pelagic species are within the broader project vicinity (see Attachments E and F); however, as these species are not found in the terrestrial habitats proposed for this project, there is no potential for project work to harass or harm. Therefore, it has been determined the project would have “*no effect*” on:

- Short-tailed albatross (*Phoebastria albatrus*)
- Guadalupe fur seal (*Arctocephalus townsendi*)
- East Pacific green sea turtle (*Chelonia mydas*)
- Leatherback sea turtle (*Dermochelys coriacea*)
- Olive ridley sea turtle (*Lepidochelys olivacea*)
- Sei whale (*Balaenoptera borealis*)
- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- North Pacific right whale (*Eubalaena japonica*)
- Humpback whale (*Megaptera novaeangliae*)
- Southern Resident killer whale (*Orcinus orca*)
- Sperm whale (*Physeter macrocephalus*)

### ***Other Special Status Species***

Database searches of the project site and surrounding USGS quadrangles indicate that suitable habitat conditions for other special status species (see Attachments E, F, G, and H) exist within the region. These include California Species of Special Concern (SSC), fully-protected species (FP), and various rare plant species with a 1A, 1B, or 2 CNPS ranking. However, habitat assessments and focused botanical surveys completed for the project document the probable absence of these species within the project BSA. Therefore, project activities are not expected to impact these species, and they are not discussed further in this document, but rather, identified and addressed in Table 1.

While a few of these protected species, such as the northern red-legged frog (*Rana aurora*), western pond turtle (*Emys marmorata*), American peregrine falcon (*Falco peregrinus anatum*), and white-tailed kite (*Elanus leucurus*), are known to have occurred adjacent to the project site, the ESL itself lacks suitable breeding, foraging, and dispersal habitat for these species. Therefore, impacts to these species due to project activities are not anticipated.

**Table 1. Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area**

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<b>AMPHIBIANS</b>					
<i>Ascaphus truei</i>	Coastal tailed frog	-/SSC	Cool, perennial, swiftly flowing streams in redwood, Douglas-fir, and yellow pine forests.	Absent	No suitable habitat in ESL.
<i>Rana aurora</i>	Northern red-legged frog	-/SSC	Densely vegetated shorelines, quiet pools in streams and marshes, occasionally ponds, in North Coast below 4000 ft.	Absent	No suitable habitat in ESL.
<i>Rana boylei</i>	Foothill yellow-legged frog	-/SSC	In/near rocky streams with cool and ephemeral to permanent water, in a variety of habitats; may be found in isolated pools.	Absent	No suitable habitat in ESL.

<sup>1</sup> **Federal Status** (Federal Endangered Species Act): E = Endangered; T = Threatened; P = Proposed for listing as threatened or endangered, or for delisting; C = Candidate; D = Delisted; - = No Listing.

**State Status** (California Endangered Species Act): E = Endangered; T = Threatened; C = Candidate; D = delisted; - = No Listing. State Status (other rankings): SSC = Species of Special Concern; FP = Fully Protected; S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable; SH = Possibly Extirpated (Historically); Sx.1 = Very Threatened; Sx.2 = Threatened; Sx.3 = No Current Threats Known.

**California Native Plant Society** (CNPS): 1A = Presumed extinct in California; 1B = Plants rare, threatened, or endangered in California and elsewhere; 2 = Rare, threatened, or endangered in California, but more common elsewhere; x.1 = seriously endangered in California; x.2 = fairly endangered in California; x.3 = Not very endangered in California.

<sup>2</sup> Includes determinations of effect for all federally listed species and designated critical habitat (CH).

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Rana draytonii</i>	California red-legged frog	T/SSC	Found near ponded water in a variety of habitats; breeds in ephemeral to permanent water such as lakes, ponds, slow streams, swamps, and reservoirs.	Absent	<b>No effect to species or CH.</b> Not known north of Navarro River. No suitable habitat in ESL.
<i>Rhyacotriton variegatus</i>	Southern torrent salamander	-/SSC	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water.	Absent	No suitable habitat in ESL.
<i>Taricha rivularis</i>	Red-bellied newt	-/SSC	Coastal drainages from Humboldt County south to Sonoma County. Found in coastal woodlands and redwood forests; breed in streams with rocky substrate and fast flows.	Absent	No suitable habitat in ESL.
<b>BIRDS</b>					
<i>Accipiter gentilis</i>	Northern goshawk	-/SSC	Nests and forages in mature coniferous forests with dense canopy and open understory.	Absent	No suitable habitat in ESL.
<i>Brachyramphus marmoratus</i>	Marbled murrelet	T/E	Mature, coastal coniferous forests for nesting up to 35 miles inland; nearby coastal water for foraging; winters on subtidal and pelagic waters, often well offshore.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	T/SSC	Coastal beaches above the normal high tide limit with wood or other debris for cover. Inland shores of salt ponds and alkali or brackish inland lakes.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	FT/SE	Wide, dense riparian forests with a thick understory of willows for nesting; prefers sites with a dominant cottonwood overstory for foraging; may avoid valley oak-riparian habitats where scrub jays are abundant.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Elanus leucurus</i>	White-tailed kite	--/FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows, or marshes for foraging; close to isolated trees for nesting and perching.	Absent	No suitable habitat in ESL.
<i>Falco peregrinus anatum</i>	American peregrine falcon	D/D, FP	Nests in a variety of locations from coastal cliffs to tall buildings or bridges within urban areas, usually adjacent to water features supporting a large prey population.	Absent	No suitable habitat in ESL.
<i>Fratercula cirrhata</i>	Tufted puffin	-/SSC	Nests in deep burrows within islands and cliffs along the coast. Forages in pelagic waters of the north Pacific.	Absent	No suitable habitat in ESL.
<i>Haliaeetus leucocephalus</i>	Bald eagle	DL/SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Typically nest within 1 mile of water, in large, old-growth, or dominant live trees with open branches. Roost communally in winter.	Absent	<b>No Effect.</b> No nesting habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/ Absent	Rationale <sup>2</sup>
		Federal/State/ CNPS			
<i>Oceanodroma homochroa</i>	Ashy storm-petrel	-/SSC	Nests in natural rock crevices found on offshore islands. Forages in nearby coastal waters of the continental slope.	Absent	No suitable habitat in ESL.
<i>Phoebastria (=Diomedea) albatrus</i>	Short-tailed albatross	E/-	Nests on two Japanese islands: Torishima and Minami-kojima. When at sea feeding, they range across the North Pacific, to as far west as California.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Progne subis</i>	Purple martin	-/SSC	Nests in abandoned woodpecker holes in trees in a variety of wooded and riparian habitats, and vertical drainage holes under elevated freeways and highway bridges.	Absent	No suitable habitat in ESL.
<i>Strix occidentalis caurina</i>	Northern spotted owl	T/T	Dense old-growth or mature forests dominated by conifers with topped trees or oaks available for nesting crevices.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<b>FISH</b>					
<i>Acipenser medirostris</i>	Southern DPS green sturgeon	T/SSC	Occupy nearshore oceanic waters, bays, and estuaries, returning to large freshwater rivers to spawn.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Entosphenus tridentatus</i>	Pacific lamprey	-/SSC	Cool freshwater streams and rivers, require sand and gravel for spawning.	Absent	No suitable habitat in ESL.
<i>Eucyclogobius newberryi</i>	Tidewater goby	E/SSC	On bottom or existing on submerged plants in shallow weedy areas of coastal lagoons and estuaries.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Oncorhynchus kisutch</i>	Central California Coast (CCC) ESU coho salmon	E/E	Cool freshwater streams and rivers, require sand and gravel for spawning.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/ Absent	Rationale <sup>2</sup>
		Federal/State/ CNPS			
<i>Oncorhynchus mykiss</i>	Northern California (NC) DPS steelhead	T/-	Cool freshwater streams and rivers, require sand and gravel for spawning.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Oncorhynchus tshawytscha</i>	California Coastal (CC) ESU Chinook salmon	T/-	Ocean and coastal streams.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<b>INVERTEBRATES</b>					
<i>Bombus occidentalis</i>	Western bumble bee	-/CE	Generalist foragers. Require pollen from floral resources throughout the duration of the colony period (spring to fall), and suitable overwintering sites for the queens. Nest in underground cavities and in open west-southwest slopes bordered by trees.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Plebejus idas lotis</i> (=Lycaeides argyrognomon) lotis	Lotis blue butterfly	E/-	Coastal sphagnum bogs, wet prairies with larval host plants ( <i>Hosackia gracilis</i> ) and adjacent shelter trees.	Absent	No suitable habitat in ESL.
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly	E/-	Early successional coastal prairie and dune habitats with larval host plants ( <i>Viola adunca</i> ) and various nectar plants.	Absent	No suitable habitat in ESL.
<b>MAMMALS</b>					
<i>Aplodontia rufa nigra</i>	Point Arena mountain beaver	E/SSC	North-facing, wooded slopes of ridges or gullies where there is abundant moisture, thick undergrowth, and soft soil for burrowing, southern Mendocino County. Point Arena north to a few miles south of Elk.	Absent	No suitable habitat in ESL.



Scientific Name	Common Name	Status <sup>1</sup>		Habitat	Habitat Present/ Absent	Rationale <sup>2</sup>
		Federal/State/ CNPS				
<i>Arborimus pomo</i>	Sonoma tree vole		-/SSC	Coastal forests Humboldt to Sonoma counties, old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species.	Absent	No suitable habitat in ESL.
<i>Arctocephalus townsendi</i>	Guadalupe fur seal		T/-	Islands off of Mexico, Baja, and Southern California.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Balaenoptera borealis</i>	Sei whale		E/-	Prefer temperate waters in the mid-latitudes, and can be found in the Atlantic, Indian, and Pacific Oceans.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Balaenoptera musculus</i>	Blue whale		E/-	Circumboreal, subpolar to sub-tropical; generally, more offshore than other whales.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Balaenoptera physalus</i>	Fin whale		E/-	Deep, offshore waters of all major oceans, primarily temperate to polar latitudes.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat		-/SSC	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings.	Absent.	No suitable habitat in ESL.
<i>Eubalaena japonica</i>	North Pacific right whale		E/-	Forages in mid-depth, offshore waters of the north Pacific Ocean, primarily temperate to polar latitudes.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Megaptera novaeangliae</i>	Humpback whale (Western North Pacific)		E/-	California/Oregon/Washington stock winter in coastal Central America-Mexico and migrate to California and southern British Columbia in summer/fall.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Orcinus orca</i>	Southern Resident killer whale		E/-	Most abundant in colder waters, including Antarctica, the North Atlantic and Pacific Oceans.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Physeter macrocephalus</i>	sperm whale		E/-	Circumboreal; typically found below 1968 feet deep.	Absent	<b>No effect.</b> No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Pekania pennanti</i>	Fisher, West Coast DPS	PT/SCT	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. They utilize cavities, snags, logs and rocky areas for cover and denning.	Absent	<b>No effect to species.</b> No suitable habitat in ESL.
<b>REPTILES</b>					
<i>Chelonia mydas</i>	East Pacific green sea turtle	T/-	Found in tropical and subtropical waters, shallows, bays and inlets; does not nest in mainland U.S. Pacific Coast.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Dermochelys coriacea</i>	Leatherback sea turtle	E/-	Mainly pelagic, but also forages in coastal waters; does not nest in mainland U.S. Pacific Coast.	Absent	<b>No effect to species or CH.</b> No suitable habitat in ESL.
<i>Emys marmorata</i>	western pond turtle	-/SSC	Found in a variety of aquatic habitats, preferring habitats with large areas for cover and basking sites. Overwinters terrestrially in burrows of leaf litter or soil.	Absent	No suitable habitat in ESL.
<i>Lepidochelys olivacea</i>	Olive ridley sea turtle	E/-	Tropical regions of the South Atlantic, Pacific and Indian Oceans; not known to nest in U.S. western Pacific Ocean.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<b>PLANTS</b>					
<i>Abronia umbellata</i> var. <i>brevifolia</i>	pink sand-verbena	-/-1B.1	Coastal dune and strand.	Absent	No suitable habitat in ESL.
<i>Agrostis blasdalei</i>	Blasdale's bent grass	-/-1B.2	Coastal bluff scrub, dunes and prairie.	Absent	No suitable habitat in ESL.
<i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i>	pygmy manzanita	-/-1B.2	Closed-cone coniferous forest, only in coastal pygmy forests.	Absent	No suitable habitat in ESL.
<i>Astragalus agnicidus</i>	Humboldt County milk vetch	-/-1B.1	Upland and coniferous forest openings, disturbed areas and roadsides.	Absent	No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Blennosperma nanum</i> var. <i>robustum</i>	Point Reyes blennosperma	-/-/1B.2	Coastal prairie and scrub.	Absent	No suitable habitat in ESL.
<i>Calamagrostis crassiglumis</i>	Thurber's reed grass	-/-/2B.1	Marshy swales, mesic coastal prairie and scrub.	Absent	No suitable habitat in ESL.
<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	coastal bluff morning-glory	-/-/1B.2	Coastal dunes and scrub, North Coast coniferous forest.	Absent	No suitable habitat in ESL.
<i>Campanula californica</i>	swamp harebell	-/-/1B.2	Bogs and fens, mesic coniferous forest, meadows and seeps, freshwater marshes and swamps.	Absent	No suitable habitat in ESL.
<i>Carex californica</i>	California sedge	-/-/2A	Coastal bogs and fens; presumed extinct in California.	Absent	No suitable habitat in ESL.
<i>Carex livida</i>	lagoon sedge	-/-/2B.2	Coastal marshes, swamps, mostly tidal.	Absent	No suitable habitat in ESL.
<i>Carex livida</i>	livid sedge	-/-/2A	Sphagnum bogs.	Absent	No suitable habitat in ESL.
<i>Carex lyngbyei</i>	Lyngbye's sedge	-/-/2B.2	Brackish or freshwater coastal marshes, swamps, sloughs.	Absent	No suitable habitat in ESL.
<i>Carex saliniformis</i>	deceiving sedge	-/-/1B.2	Coastal marshes, wet meadows, sparsely vegetated area.	Absent	No suitable habitat in ESL.
<i>Carex viridula</i> ssp. <i>viridula</i>	green yellow sedge	-/-/2B.3	Coastal marshes, swamps, bogs, fens.	Absent	No suitable habitat in ESL.
<i>Castilleja ambigua</i> var. <i>humboldtensis</i>	Humboldt Bay owl's-clover	-/-/2B.2	Coastal salt marshes, sloughs.	Absent	No suitable habitat in ESL.
<i>Castilleja littoralis</i>	Oregon coast paintbrush	-/-/2B.2	Sandy soils in coastal bluff scrub, dunes and scrub.	Absent	No suitable habitat in ESL.
<i>Castilleja mendocinensis</i>	Mendocino Coast paintbrush	-/-/1B.2	Coastal bluff scrub, dunes, prairie and scrub, closed-cone coniferous forest.	Absent	No suitable habitat in ESL.
<i>Chorizanthe howellii</i>	Howell's spineflower	E/T/1B.2	Coastal dunes and prairie, roadsides, sandy soil.	Absent	<b>No effect.</b> No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Clarkia amoena</i> ssp. <i>whitneyi</i>	Whitney's farewell-to-spring	-/-/1B.1	Coastal bluff scrub and coastal scrub.	Absent	No suitable habitat in ESL.
<i>Collinsia corymbosa</i>	round-headed Chinese-houses	-/-/1B.2	Coastal dunes and prairie.	Absent	No suitable habitat in ESL.
<i>Cornus canadensis</i>	bunchberry	-/-/2B.2	Shaded forests, bogs, fens.	Absent	No suitable habitat in ESL.
<i>Cuscuta pacifica</i> var. <i>papillata</i>	Mendocino dodder	-/-/1B.2	Dry coastal dunes, on <i>Lupinus</i> , <i>Gnaphalium</i> , <i>Silene</i> .	Absent	No suitable habitat in ESL.
<i>Erigeron supplex</i>	supple daisy	-/-/1B.2	Chaparral.	Absent	No suitable habitat in ESL.
<i>Erysimum concinnum</i>	bluff wallflower	-/-/1B.2	Coastal dunes, coastal bluff scrub, and coastal prairie.	Absent	No suitable habitat in ESL.
<i>Erysimum menziesii</i> (all subspecies except <i>E. concinnum</i> )	Menzies' wallflower	E/E/1B.1	Coastal dunes.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Fritillaria roderickii</i>	Roderick's fritillary	-/E/1B.1	Coastal bluff scrub, coastal prairie, valley and foothill grassland.	Absent	<b>No effect.</b> No suitable habitat in ESL.
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	-/-/1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grassland.	Absent	No suitable habitat in ESL.
<i>Gilia millefoliata</i>	dark-eyed gilia	-/-/1B.2	Coastal dunes.	Absent	No suitable habitat in ESL.
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	congested-headed hayfield tarplant	-/-/1B.2	Valley and foothill grasslands, sometimes roadsides.	Absent	No suitable habitat in ESL.
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	-/-/1B.2	Coastal bluff scrub (sandy), coastal dunes.	Absent	No suitable habitat in ESL.
<i>Hesperocyparis pygmaea</i>	pygmy cypress	-/-/1B.2	Closed-cone coniferous forest, only in coastal pygmy forests.	Absent	No suitable habitat in ESL.
<i>Horkelia marinensis</i>	Point Reyes horkelia	-/-/1B.2	Coastal dunes, prairies, scrub.	Absent	No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/ Absent	Rationale <sup>2</sup>
		Federal/State/ CNPS			
<i>Juncus supiniformis</i>	hair-leaved rush	-/-/2B.2	Bogs, fens, freshwater marshes.	Absent	No suitable habitat in ESL.
<i>Kopsiopsis hookeri</i>	small groundcone	-/-/2B.3	Dry forest and chaparral habitats.	Absent	No suitable habitat in ESL.
<i>Lasthenia californica</i> ssp. <i>bakeri</i>	Baker's goldfields	-/-/1B.2	Closed-cone coniferous forest (openings), Coastal scrub, meadows and seeps, marshes and swamp.	Absent	No suitable habitat in ESL.
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	-/-/1B.2	Coastal bluff scrub, coastal dunes, Coastal scrub.	Absent	No suitable habitat in ESL.
<i>Lathyrus palustris</i>	marsh pea	-/-/2B.2	Variety of wet coastal habitats.	Absent	No suitable habitat in ESL.
<i>Lilium maritimum</i>	coast lily	-/-/1B.1	Coastal forests, prairie, scrub, freshwater marshes and swamps, sometimes roadsides.	Absent	No suitable habitat in ESL.
<i>Microseris borealis</i>	northern microseris	-/-/2B.1	Bogs, seeps, wet meadows, mesic forests.	Absent	No suitable habitat in ESL.
<i>Oenothera wolfii</i>	Wolf's evening-primrose	-/-/1B.1	Variety of coastal habitats that are sandy and mesic.	Absent	No suitable habitat in ESL.
<i>Packera bolanderi</i> var. <i>bolanderi</i>	seacoast ragwort	-/-/2B.2	Coastal rocky/gravelly slopes, cliffs, in Coastal scrub and coniferous forest habitats.	Absent	No suitable habitat in ESL.
<i>Phacelia insularis</i> var. <i>continentis</i>	North Coast phacelia	-/-/1B.2	Sandy, coastal bluff scrub, prairie and dunes.	Absent	No suitable habitat in ESL.
<i>Pinus contorta</i> ssp. <i>bolanderi</i>	Bolander's beach pine	-/-/1B.2	Closed-cone coniferous forest, only in coastal pygmy forests.	Absent	No suitable habitat in ESL.
<i>Piperia candida</i>	white-flowered rein orchid	-/-/1B.2	Coniferous forests in Northwest CA and north.	Absent	No suitable habitat in ESL.
<i>Puccinellia pumila</i>	dwarf alkali grass	-/-/2B.2	Coastal salt marshes and swamps.	Absent	No suitable habitat in ESL.
<i>Ramalina thrausta</i>	angel's hair lichen	-/-/2B.1	Coniferous forests in Northwest CA and north.	Absent	No suitable habitat in ESL.

Scientific Name	Common Name	Status <sup>1</sup>	Habitat	Habitat Present/Absent	Rationale <sup>2</sup>
		Federal/State/CNPS			
<i>Rhynchospora alba</i>	white beaked-rush	-/-/2B.2	Bogs, swamps, fens, forest wetlands.	Absent	No suitable habitat in ESL.
<i>Sanguisorba officinalis</i>	great burnet	-/-/2B.2	Variety of wetland and forested habitats, often with serpentinite soil.	Absent	No suitable habitat in ESL.
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	-/-/1B.2	Coastal buff scrub and prairie, roadsides.	Absent	No suitable habitat in ESL.
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	purple-stemmed checkerbloom	-/-/1B.2	Coastal prairie, forest openings.	Absent	No suitable habitat in ESL.
<i>Trifolium trichocalyx</i>	Monterey clover	E/E/1B.1	Closed-cone coniferous forest (sandy, openings, burned areas).	Absent	<b>No effect.</b> No suitable habitat in ESL and project not within range of species.
<i>Triquetrella californica</i>	coastal triquetrella	-/-/1B.2	Coastal scrub and coastal bluff scrub.	Absent	No suitable habitat in ESL.
<i>Viola palustris</i>	alpine marsh violet	-/-/2B.2	Coastal bogs and fens, and mesic coastal scrub.	Absent	No suitable habitat in ESL.
<b>SENSITIVE HABITATS</b>					
Coastal Brackish Marsh		-/S2.1	In shallow, standing or slow-moving waters in coastal bays, estuaries and lagoons, where fresh water meets salt water in a tidal area.	Absent	No suitable habitat in ESL.
Coastal and Valley Freshwater Marsh		-/S2.1	In shallow, standing or slow-moving fresh water at the edge of ponds and streams, typically permanently flooded; dominated by cattails and bulrushes.	Absent	No suitable habitat in ESL.
Fen		-/S2.1	Groundwater-fed wetland with permanently waterlogged soils ranging in pH levels.	Absent	No suitable habitat in ESL.
Grand Fir Forest		-/S2	Forests along the coast dominated by grand fir ( <i>Abies grandis</i> ).	Absent	No suitable habitat in ESL.

<i>Scientific Name</i>	<i>Common Name</i>	<i>Status<sup>1</sup></i>	<i>Habitat</i>	<i>Habitat Present/Absent</i>	<i>Rationale<sup>2</sup></i>
		<i>Federal/State/CNPS</i>			
Mendocino Pygmy Cypress Forest		-/S2	Forests along the coast dominated by pygmy cypress.	Absent	No suitable habitat in ESL.
Northern Coastal Salt Marsh		-/S3.2	Restricted to the intertidal zone of protected and shallow bays, estuaries and lagoons.	Absent	No suitable habitat in ESL.
Sphagnum Bog		-/S2.1	Cold, highly acidic, permanently waterlogged soils.	Absent	No suitable habitat in ESL.

## ***Potential Project Impacts and Environmental Commitments***

### ***Wildlife Species and Migratory Corridors***

Wildlife corridors are areas of habitat that allow movement of wildlife from one habitat patch to another for seasonal or daily migration. Stream courses, and their associated riparian areas, are often used as migration corridors by aquatic and terrestrial species. If corridors are degraded, habitat fragmentation can result.

The project ESL is not expected to provide migratory corridor habitat for wildlife. SR 1 is a barrier to migration, contributing to habitat fragmentation due to linear segments of unvegetated land and increased potential for wildlife/vehicle collisions. The right of way fence and rural development to the east of the ESL also serve as barriers to wildlife migration.

### ***Potential to impact rare plants in vegetation adjacent to construction, including designated staging areas***

Several species of sensitive plants may potentially occur within the greater project area adjacent to the project ESL (i.e., within the 6-quad search area), including the federally endangered species listed in Table 1 above. All sensitive plant species with the potential to occur are shown in the CNDDDB and CNPS queries (Attachments G and H). This project does not include ground-disturbing activities beyond modified surfaces. Additionally, none of the species with potential to occur in the area were detected during protocol-level botanical surveys and thus are inferred to be absent in and adjacent to the project area.

Impacts to these species are not anticipated, therefore no avoidance or minimization measures are proposed.

***Potential to impact jurisdictional wetlands, waters of the U.S., or waters of the State***

No watercourses or wetlands are present within the proposed project footprint. A non-tidal, forested, seasonally flooded wetland borders the west side of SR 1 from PM 60.85 to PM 61.12. As no project activities are planned for southbound SR 1, impacts to the wetland are not anticipated. With implementation of the standard specification BMPs mentioned previously, construction along the road surface, as well as use of staging areas, would not impact the wetland bordering the opposite side of the highway. All construction at these locations would occur from the existing roadway. There would be no impacts to wetlands or waters because of the proposed activities; therefore, mitigation measures are not required.

***Sensitive Habitats and Natural Communities***

There are no sensitive habitats or natural communities, including wetlands, within the ESL. Although there is a forested wetland adjacent to the west side of SR 1 as mentioned in the previous section, with implementation of standard BMPs, project impacts to resources are not anticipated. The remainder of the vegetation observed consists of plant species common in a disturbed setting.

***Potential to impact nesting birds***

Nesting birds are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, and 3513. Nesting birds may be present during the nesting season (February 1- September 15) on the ground and in trees, shrubs, and structures. Regulatory references to “nests” imply that the nests are active. An active nest is defined as containing eggs or having one or more adult birds in close attendance. A nest that does not have eggs or adults present, and a nest outside the nesting season, is not protected. Nests containing abandoned eggs (often encountered outside of nesting season) are also not protected. An exception to this definition is raptors and colonial nesting birds that build large nests used repetitively from year to year. During the nesting season, birds can be impacted by tree and vegetation removal. All vegetation removal would be done outside the nesting season, therefore the work would not impact migratory birds. If vegetation requires clearing within the nesting season, surveys would be conducted (no earlier than five days prior to vegetation removal) by a qualified biologist to identify and locate nesting birds.

***Effects Findings***



After reviewing the Environmental Study Request and additional project information, it has been determined the proposed project would have no effect on any federally or state listed endangered, threatened, or candidate species or species of special concern. Most of the proposed work would take place on the existing pavement and modified surfaces; additionally, the clearing and grubbing required to build the retaining wall would be immediately next to the highway which consists of landscaped ornamental plant species that are very unlikely to support any special-status species or resources. No parts of the project are within critical habitat of any federally or state-listed threatened or endangered species or species of special concern.

No jurisdictional wetlands, waters of the U.S., or waters of the State were identified within the project ESL (existing roadway and shoulders). No permits/certifications from the USFWS, CDFW, United States Army Corps of Engineers (USACE), and the Regional Water Quality Control Board would be required. However, because the location of proposed ground-disturbing activities, including construction of a retaining wall, is within the Coastal Zone, the project would require a Coastal Development Permit (CDP).

**If the scope of this project changes or extends beyond what is described above, reevaluation would be required.** If you have any questions about this transmittal, please contact Tracy Walker at (707) 445-6432 or at [tracy.walker@dot.ca.gov](mailto:tracy.walker@dot.ca.gov)

## **References**

- Baldwin, Bruce G. et al. (eds). 2012. The Jepson Manual: Vascular Plants of California, 2nd Edition. University of California Press, Berkeley.
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\_\_\_\_\_. 2006. Arcata Fish and Wildlife Office. Draft Guidelines for Habitat Assessments and  
Surveys for Behren's Silverspot Butterfly (*Speyeria zerene behrensii*).

## ***Attachments***

***Attachment A: Project Vicinity Map***

***Attachment B: Project Location Map***

***Attachment C: Project ESL Layouts***

***Attachment D: Project Area Photos***

***Attachment E: USFWS IPaC Species List***

***Attachment F: NMFS Species List***

***Attachment G: CNDDDB Rarefind Species List***

***Attachment H: CNPS Rare Plant Species List***



## ***ATTACHMENT A. Project Vicinity Map***

NOTE: The Project Vicinity Map was previously provided earlier in the report and was omitted from the next page to avoid duplication.



## ***ATTACHMENT B. Project Location Map***

NOTE: The Project Location Map was previously provided earlier in the report and was omitted from the next page to avoid duplication.



## ***ATTACHMENT C. Project ESL Layouts***

NOTE: The Project ESL Layouts were previously provided earlier in the report and was omitted from the next pages to avoid duplication.





***ATTACHMENT D. Project Area Photos***





**Photo 1.** View of northbound SR 1 and SR 20 at location of proposed retaining wall east of SR 1 looking northeast.



**Photo 2.** View of Biological Study Area southwest of intersection of SR 1 and SR 20, looking north.



## ***ATTACHMENT E. USFWS IPaC Species List***

NOTE: Species lists have been updated, and are provided in the following pages.



## **Updated Species Lists (August 2020):**

- + USFWS IPaC Species List**
- + NMFS Species List**
- + CNDDDB Rarefind Species List**
- + CNPS Rare Plant Species List**







# 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: 08EACT00-2020-SLI-0081  
Event Code: 08EACT00-2020-E-00789  
Project Name: Fort Bragg ADA Improvement

August 14, 2020

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](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

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## Project Summary

Consultation Code: 08EACT00-2020-SLI-0081

Event Code: 08EACT00-2020-E-00789

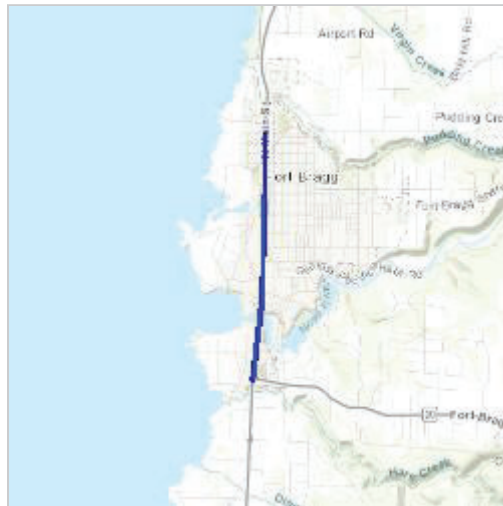
Project Name: Fort Bragg ADA Improvement

Project Type: TRANSPORTATION

Project Description: The ADA improvements within Fort Bragg will include a retaining wall, new sidewalks, extended curb ramps, and renovating driveways, along with additional signage and road striping.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.435197825671075N123.8061355041384W>



Counties: Mendocino, CA

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## Endangered Species Act Species

There is a total of 18 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, 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
Point Arena Mountain Beaver <i>Aplodontia rufa nigra</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7727">https://ecos.fws.gov/ecp/species/7727</a>	Endangered

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## Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened
Short-tailed Albatross <i>Phoebastria (=Diomedea) albatrus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/433">https://ecos.fws.gov/ecp/species/433</a>	Endangered
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 <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	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: <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a>	Threatened
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1493">https://ecos.fws.gov/ecp/species/1493</a>	Endangered

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened

## Fishes

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

## Insects

NAME	STATUS
Behren's Silverspot Butterfly <i>Speyeria zerene behrensii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/900">https://ecos.fws.gov/ecp/species/900</a>	Endangered
Lotis Blue Butterfly <i>Lycaeides argyrognomon lotis</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5174">https://ecos.fws.gov/ecp/species/5174</a>	Endangered

## Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4338">https://ecos.fws.gov/ecp/species/4338</a>	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a>	Endangered
Howell's Spineflower <i>Chorizanthe howellii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7607">https://ecos.fws.gov/ecp/species/7607</a>	Endangered
Menzies' Wallflower <i>Erysimum menziesii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2935">https://ecos.fws.gov/ecp/species/2935</a>	Endangered
Monterey Clover <i>Trifolium trichocalyx</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4282">https://ecos.fws.gov/ecp/species/4282</a>	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6459">https://ecos.fws.gov/ecp/species/6459</a>	Endangered



## **Critical habitats**

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

**From:** [NMFSWCRCA Specieslist - NOAA Service Account](#)  
**To:** [Walker\\_Tracy@DOT](mailto:Walker_Tracy@DOT)  
**Subject:** Re: Request for Official Species List for Caltrans Fort Bragg ADA Improvement Project  
**Date:** Friday, August 14, 2020 12:13:03 PM

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**EXTERNAL EMAIL.** Links/attachments may not be safe.

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

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

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

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

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600



Quad Name **Fort Bragg**

Quad Number **39123-D7**

### **ESA Anadromous Fish**

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

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - **X**  
CC Chinook Salmon Critical Habitat - **X**  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat - **X**  
CCC Steelhead Critical Habitat -  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

### **ESA Marine Invertebrates**

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

## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

## **ESA Sea Turtles**

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

## **ESA Whales**

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

## **ESA Pinnipeds**

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

## **Essential Fish Habitat**

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

## **MMPA Species (See list at left)**

## **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**





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



**Query Criteria:** Quad (Fort Bragg (3912347) OR Mendocino (3912337) OR Inglenook (3912357) OR Dutchmans Knoll (3912356) OR Noyo Hill (3912346) OR Mathison Peak (3912336))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>alpine marsh violet</b> <i>Viola palustris</i>	PDVIO041G0	None	None	G5	S1S2	2B.2
<b>angel's hair lichen</b> <i>Ramalina thrausta</i>	NLLEC3S340	None	None	G5?	S2S3	2B.1
<b>ashy storm-petrel</b> <i>Oceanodroma homochroa</i>	ABNDC04030	None	None	G2	S2	SSC
<b>Baker's goldfields</b> <i>Lasthenia californica ssp. bakeri</i>	PDAST5L0C4	None	None	G3T1	S1	1B.2
<b>Blasdale's bent grass</b> <i>Agrostis blasdalei</i>	PMPOA04060	None	None	G2	S2	1B.2
<b>bluff wallflower</b> <i>Erysimum concinnum</i>	PDBRA160E3	None	None	G3	S2	1B.2
<b>Bolander's beach pine</b> <i>Pinus contorta ssp. bolanderi</i>	PGPIN04081	None	None	G5T2	S2	1B.2
<b>bunchberry</b> <i>Cornus canadensis</i>	PDCOR01040	None	None	G5	S2	2B.2
<b>California sedge</b> <i>Carex californica</i>	PMCYP032D0	None	None	G5	S2	2B.2
<b>coast lily</b> <i>Lilium maritimum</i>	PMLIL1A0C0	None	None	G2	S2	1B.1
<b>Coastal and Valley Freshwater Marsh</b> <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
<b>coastal bluff morning-glory</b> <i>Calystegia purpurata ssp. saxicola</i>	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
<b>Coastal Brackish Marsh</b> <i>Coastal Brackish Marsh</i>	CTT52200CA	None	None	G2	S2.1	
<b>coastal triquetrella</b> <i>Triquetrella californica</i>	NBMUS7S010	None	None	G2	S2	1B.2
<b>coho salmon - central California coast ESU</b> <i>Oncorhynchus kisutch pop. 4</i>	AFCHA02034	Endangered	Endangered	G4	S2?	
<b>congested-headed hayfield tarplant</b> <i>Hemizonia congesta ssp. congesta</i>	PDAST4R065	None	None	G5T2	S2	1B.2
<b>dark-eyed gilia</b> <i>Gilia millefoliata</i>	PDPLM04130	None	None	G2	S2	1B.2
<b>deceiving sedge</b> <i>Carex saliniformis</i>	PMCYP03BY0	None	None	G2	S2	1B.2
<b>dwarf alkali grass</b> <i>Puccinellia pumila</i>	PMPOA531L0	None	None	G4?	SH	2B.2





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<b>Fen</b> <i>Fen</i>	CTT51200CA	None	None	G2	S1.2	
<b>foothill yellow-legged frog</b> <i>Rana boylei</i>	AAABH01050	None	Endangered	G3	S3	SSC
<b>globose dune beetle</b> <i>Coelus globosus</i>	IICOL4A010	None	None	G1G2	S1S2	
<b>Grand Fir Forest</b> <i>Grand Fir Forest</i>	CTT82120CA	None	None	G1	S1.1	
<b>great blue heron</b> <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
<b>great burnet</b> <i>Sanguisorba officinalis</i>	PDROS1L060	None	None	G5?	S2	2B.2
<b>green yellow sedge</b> <i>Carex viridula ssp. viridula</i>	PMCYP03EM5	None	None	G5T5	S2	2B.3
<b>hair-leaved rush</b> <i>Juncus supiniformis</i>	PMJUN012R0	None	None	G5	S1	2B.2
<b>hoary bat</b> <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4	
<b>Howell's spineflower</b> <i>Chorizanthe howellii</i>	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
<b>Humboldt Bay owl's-clover</b> <i>Castilleja ambigua var. humboldtiensis</i>	PDSCR0D402	None	None	G4T2	S2	1B.2
<b>Humboldt County milk-vetch</b> <i>Astragalus agnicidus</i>	PDFAB0F080	None	Endangered	G2	S2	1B.1
<b>lagoon sedge</b> <i>Carex lenticularis var. limnophila</i>	PMCYP037A7	None	None	G5T5	S1	2B.2
<b>leafy-stemmed mitrewort</b> <i>Mitellastrum caulescens</i>	PDSAX0N020	None	None	G5	S4	4.2
<b>livid sedge</b> <i>Carex livida</i>	PMCYP037L0	None	None	G5	SH	2A
<b>lotis blue butterfly</b> <i>Plebejus idas lotis</i>	IILEPG5013	Endangered	None	G5TH	SH	
<b>Lyngbye's sedge</b> <i>Carex lyngbyei</i>	PMCYP037Y0	None	None	G5	S3	2B.2
<b>maple-leaved checkerbloom</b> <i>Sidalcea malachroides</i>	PDMAL110E0	None	None	G3	S3	4.2
<b>marbled murrelet</b> <i>Brachyramphus marmoratus</i>	ABNNN06010	Threatened	Endangered	G3G4	S1	
<b>marsh pea</b> <i>Lathyrus palustris</i>	PDFAB250P0	None	None	G5	S2	2B.2
<b>Mendocino Coast paintbrush</b> <i>Castilleja mendocinensis</i>	PDSCR0D3N0	None	None	G2	S2	1B.2



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<b>Mendocino dodder</b> <i>Cuscuta pacifica</i> var. <i>papillata</i>	PDCUS011A2	None	None	G5T1	S1	1B.2
<b>Mendocino leptonetid spider</b> <i>Calileptoneta wapiti</i>	ILARAU6040	None	None	G1	S1	
<b>Mendocino Pygmy Cypress Forest</b> <i>Mendocino Pygmy Cypress Forest</i>	CTT83161CA	None	None	G2	S2.1	
<b>Menzies' wallflower</b> <i>Erysimum menziesii</i>	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
<b>Methuselah's beard lichen</b> <i>Usnea longissima</i>	NLLEC5P420	None	None	G4	S4	4.2
<b>Monterey clover</b> <i>Trifolium trichocalyx</i>	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
<b>North American porcupine</b> <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
<b>North Coast phacelia</b> <i>Phacelia insularis</i> var. <i>continentis</i>	PDHYD0C2B1	None	None	G2T2	S2	1B.2
<b>Northern Coastal Salt Marsh</b> <i>Northern Coastal Salt Marsh</i>	CTT52110CA	None	None	G3	S3.2	
<b>northern goshawk</b> <i>Accipiter gentilis</i>	ABNKC12060	None	None	G5	S3	SSC
<b>northern microseris</b> <i>Microseris borealis</i>	PDAST6E030	None	None	G5	S1	2B.1
<b>northern red-legged frog</b> <i>Rana aurora</i>	AAABH01021	None	None	G4	S3	SSC
<b>obscure bumble bee</b> <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	
<b>Oregon coast paintbrush</b> <i>Castilleja litoralis</i>	PDSCR0D012	None	None	G3	S3	2B.2
<b>Oregon goldthread</b> <i>Coptis laciniata</i>	PDRAN0A020	None	None	G4?	S3?	4.2
<b>osprey</b> <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
<b>Pacific gilia</b> <i>Gilia capitata</i> ssp. <i>pacifica</i>	PDPLM040B6	None	None	G5T3	S2	1B.2
<b>Pacific lamprey</b> <i>Entosphenus tridentatus</i>	AFBAA02100	None	None	G4	S4	SSC
<b>Pacific tailed frog</b> <i>Ascaphus truei</i>	AAABA01010	None	None	G4	S3S4	SSC
<b>perennial goldfields</b> <i>Lasthenia californica</i> ssp. <i>macrantha</i>	PDAST5L0C5	None	None	G3T2	S2	1B.2
<b>pink sand-verbena</b> <i>Abronia umbellata</i> var. <i>breviflora</i>	PDNYC010N4	None	None	G4G5T2	S2	1B.1



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<b>Point Reyes blennosperma</b> <i>Blennosperma nanum</i> var. <i>robustum</i>	PDAST1A022	None	Rare	G4T2	S2	1B.2
<b>Point Reyes horkelia</b> <i>Horkelia marinensis</i>	PDR0S0W0B0	None	None	G2	S2	1B.2
<b>purple martin</b> <i>Progne subis</i>	ABPAU01010	None	None	G5	S3	SSC
<b>purple-stemmed checkerbloom</b> <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	PDMAL110FL	None	None	G5T1	S1	1B.2
<b>pygmy cypress</b> <i>Hesperocyparis pygmaea</i>	PGCUP04032	None	None	G1	S1	1B.2
<b>pygmy manzanita</b> <i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i>	PDERI04280	None	None	G3?T1	S1	1B.2
<b>red-bellied newt</b> <i>Taricha rivularis</i>	AAAAF02020	None	None	G4	S2	SSC
<b>round-headed Chinese-houses</b> <i>Collinsia corymbosa</i>	PDSCR0H060	None	None	G1	S1	1B.2
<b>running-pine</b> <i>Lycopodium clavatum</i>	PPLYC01080	None	None	G5	S3	4.1
<b>seacoast ragwort</b> <i>Packera bolanderi</i> var. <i>bolanderi</i>	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
<b>short-leaved evax</b> <i>Hesper-evax sparsiflora</i> var. <i>brevifolia</i>	PDASTE5011	None	None	G4T3	S3	1B.2
<b>Sonoma tree vole</b> <i>Arborimus pomo</i>	AMAFF23030	None	None	G3	S3	SSC
<b>southern torrent salamander</b> <i>Rhyacotriton variegatus</i>	AAAAJ01020	None	None	G3G4	S2S3	SSC
<b>Sphagnum Bog</b> <i>Sphagnum Bog</i>	CTT51110CA	None	None	G3	S1.2	
<b>steelhead - northern California DPS</b> <i>Oncorhynchus mykiss irideus</i> pop. 16	AFCHA0209Q	Threatened	None	G5T2T3Q	S2S3	
<b>supple daisy</b> <i>Erigeron supplex</i>	PDAST3M3Z0	None	None	G2	S2	1B.2
<b>swamp harebell</b> <i>Campanula californica</i>	PDCAM02060	None	None	G3	S3	1B.2
<b>Ten Mile shoulderband</b> <i>Noyo intersessa</i>	IMGASC5070	None	None	G2	S2	
<b>Thurber's reed grass</b> <i>Calamagrostis crassiglumis</i>	PMPOA17070	None	None	G3Q	S2	2B.1
<b>tidewater goby</b> <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SSC
<b>Townsend's big-eared bat</b> <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC



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<b>tufted puffin</b> <i>Fratercula cirrhata</i>	ABNNN12010	None	None	G5	S1S2	SSC
<b>western bumble bee</b> <i>Bombus occidentalis</i>	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western snowy plover</b> <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<b>white beaked-rush</b> <i>Rhynchospora alba</i>	PMCYP0N010	None	None	G5	S2	2B.2
<b>white-flowered rein orchid</b> <i>Piperia candida</i>	PMORC1X050	None	None	G3	S3	1B.2
<b>Whitney's farewell-to-spring</b> <i>Clarkia amoena ssp. whitneyi</i>	PDONA05025	None	None	G5T1	S1	1B.1
<b>Wolf's evening-primrose</b> <i>Oenothera wolfii</i>	PDONA0C1K0	None	None	G2	S1	1B.1

Record Count: 90



\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

70 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quads 3912357, 3912356, 3912347, 3912346 3912337 and 3912336;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Abronia umbellata var. breviflora</a>	pink sand-verbena	Nyctaginaceae	perennial herb	Jun-Oct	1B.1	S2	G4G5T2
<a href="#">Agrostis blasdalei</a>	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	1B.2	S2	G2
<a href="#">Angelica lucida</a>	sea-watch	Apiaceae	perennial herb	May-Sep	4.2	S3	G5
<a href="#">Arctostaphylos nummularia ssp. mendocinoensis</a>	pygmy manzanita	Ericaceae	perennial evergreen shrub	Jan	1B.2	S1	G3?T1
<a href="#">Astragalus agnicidus</a>	Humboldt County milk-vetch	Fabaceae	perennial herb	Apr-Sep	1B.1	S2	G2
<a href="#">Blennosperma nanum var. robustum</a>	Point Reyes blennosperma	Asteraceae	annual herb	Feb-Apr	1B.2	S2	G4T2
<a href="#">Calamagrostis bolanderi</a>	Bolander's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	4.2	S4	G4
<a href="#">Calamagrostis crassiglumis</a>	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	2B.1	S2	G3Q
<a href="#">Calystegia purpurata ssp. saxicola</a>	coastal bluff morning-glory	Convolvulaceae	perennial herb	(Mar)Apr-Sep	1B.2	S2S3	G4T2T3
<a href="#">Campanula californica</a>	swamp harebell	Campanulaceae	perennial rhizomatous herb	Jun-Oct	1B.2	S3	G3
<a href="#">Carex californica</a>	California sedge	Cyperaceae	perennial rhizomatous herb	May-Aug	2B.3	S2	G5
<a href="#">Carex lenticularis var. limnophila</a>	lagoon sedge	Cyperaceae	perennial herb	Jun-Aug	2B.2	S1	G5T5
<a href="#">Carex livida</a>	livid sedge	Cyperaceae	perennial rhizomatous herb	Jun	2A	SH	G5
<a href="#">Carex lyngbyei</a>	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	2B.2	S3	G5
<a href="#">Carex saliniformis</a>	deceiving sedge	Cyperaceae	perennial rhizomatous herb	May-Jun(Jul)	1B.2	S2	G2
<a href="#">Carex viridula ssp. viridula</a>	green yellow sedge	Cyperaceae	perennial herb	(Jun)Jul-Sep(Nov)	2B.3	S2	G5T5

<a href="#"><u>Castilleja ambigua var. ambigua</u></a>	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	4.2	S3S4	G4T4
<a href="#"><u>Castilleja ambigua var. humboldtensis</u></a>	Humboldt Bay owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-Aug	1B.2	S2	G4T2
<a href="#"><u>Castilleja litoralis</u></a>	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun-Jul	2B.2	S3	G3
<a href="#"><u>Castilleja mendocinensis</u></a>	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Aug	1B.2	S2	G2
<a href="#"><u>Ceanothus gloriosus var. exaltatus</u></a>	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	4.3	S4	G4T4
<a href="#"><u>Ceanothus gloriosus var. gloriosus</u></a>	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	4.3	S4	G4T4
<a href="#"><u>Chorizanthe howellii</u></a>	Howell's spineflower	Polygonaceae	annual herb	May-Jul	1B.2	S1	G1
<a href="#"><u>Chrysosplenium glechomifolium</u></a>	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun(Jul)	4.3	S3	G5?
<a href="#"><u>Clarkia amoena ssp. whitneyi</u></a>	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	1B.1	S1	G5T1
<a href="#"><u>Collinsia corymbosa</u></a>	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1
<a href="#"><u>Coptis laciniata</u></a>	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	4.2	S3?	G4?
<a href="#"><u>Cornus canadensis</u></a>	bunchberry	Cornaceae	perennial rhizomatous herb	May-Jul	2B.2	S2	G5
<a href="#"><u>Cuscuta pacifica var. papillata</u></a>	Mendocino dodder	Convolvulaceae	annual vine (parasitic)	(Jun)Jul-Oct	1B.2	S1	G5T1
<a href="#"><u>Erigeron supplex</u></a>	supple daisy	Asteraceae	perennial herb	May-Jul	1B.2	S2	G2
<a href="#"><u>Erysimum concinnum</u></a>	bluff wallflower	Brassicaceae	annual / perennial herb	Feb-Jul	1B.2	S2	G3
<a href="#"><u>Erysimum menziesii</u></a>	Menzies' wallflower	Brassicaceae	perennial herb	Mar-Sep	1B.1	S1	G1
<a href="#"><u>Fritillaria roderickii</u></a>	Roderick's fritillary	Liliaceae	perennial bulbiferous herb	Mar-May	1B.1	S1	G1Q
<a href="#"><u>Gilia capitata ssp. pacifica</u></a>	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	1B.2	S2	G5T3
<a href="#"><u>Gilia millefoliata</u></a>	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2
<a href="#"><u>Hemizonia congesta ssp. congesta</u></a>	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
<a href="#"><u>Hesperexax sparsiflora var. brevifolia</u></a>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3
<a href="#"><u>Hesperocyparis pygmaea</u></a>	pygmy cypress	Cupressaceae	perennial evergreen tree		1B.2	S1	G1
<a href="#"><u>Horkelia marinensis</u></a>	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	1B.2	S2	G2
<a href="#"><u>Hosackia gracilis</u></a>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	4.2	S3	G3G4
<a href="#"><u>Iris longipetala</u></a>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May	4.2	S3	G3
<a href="#"><u>Juncus supiniformis</u></a>	hair-leaved rush	Juncaceae	perennial rhizomatous herb	Apr-May(Jun-Jul)	2B.2	S1	G5
<a href="#"><u>Lasthenia californica ssp. bakeri</u></a>	Baker's goldfields	Asteraceae	perennial herb	Apr-Oct	1B.2	S1	G3T1
	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2

<a href="#"><u>Lasthenia californica ssp. macrantha</u></a>								
<a href="#"><u>Lathyrus palustris</u></a>	marsh pea	Fabaceae	perennial herb	Mar-Aug	2B.2	S2	G5	
<a href="#"><u>Lilium maritimum</u></a>	coast lily	Liliaceae	perennial bulbiferous herb	May-Aug	1B.1	S2	G2	
<a href="#"><u>Lilium rubescens</u></a>	redwood lily	Liliaceae	perennial bulbiferous herb	Apr-Aug(Sep)	4.2	S3	G3	
<a href="#"><u>Listera cordata</u></a>	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	4.2	S4	G5	
<a href="#"><u>Lycopodium clavatum</u></a>	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	4.1	S3	G5	
<a href="#"><u>Microseris borealis</u></a>	northern microseris	Asteraceae	perennial herb	Jun-Sep	2B.1	S1	G5	
<a href="#"><u>Mitellastra caulescens</u></a>	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	4.2	S4	G5	
<a href="#"><u>Oenothera wolfii</u></a>	Wolf's evening-primrose	Onagraceae	perennial herb	May-Oct	1B.1	S1	G2	
<a href="#"><u>Packera bolanderi var. bolanderi</u></a>	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	2B.2	S2S3	G4T4	
<a href="#"><u>Phacelia insularis var. continentis</u></a>	North Coast phacelia	Hydrophyllaceae	annual herb	Mar-May	1B.2	S2	G2T2	
<a href="#"><u>Pinus contorta ssp. bolanderi</u></a>	Bolander's beach pine	Pinaceae	perennial evergreen tree		1B.2	S2	G5T2	
<a href="#"><u>Piperia candida</u></a>	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	1B.2	S3	G3	
<a href="#"><u>Pityopus californicus</u></a>	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	4.2	S4	G4G5	
<a href="#"><u>Pleuropogon refractus</u></a>	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	4.2	S4	G4	
<a href="#"><u>Puccinellia pumila</u></a>	dwarf alkali grass	Poaceae	perennial herb	Jul	2B.2	SH	G4?	
<a href="#"><u>Ramalina thrausta</u></a>	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)		2B.1	S2?	G5	
<a href="#"><u>Rhynchospora alba</u></a>	white beaked-rush	Cyperaceae	perennial rhizomatous herb	Jun-Aug	2B.2	S2	G5	
<a href="#"><u>Sanguisorba officinalis</u></a>	great burnet	Rosaceae	perennial rhizomatous herb	Jul-Oct	2B.2	S2	G5?	
<a href="#"><u>Sidalcea malachroides</u></a>	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	4.2	S3	G3	
<a href="#"><u>Sidalcea malviflora ssp. purpurea</u></a>	purple-stemmed checkerbloom	Malvaceae	perennial rhizomatous herb	May-Jun	1B.2	S1	G5T1	
<a href="#"><u>Tiarella trifoliata var. trifoliata</u></a>	trifoliolate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun-Aug	3.2	S2S3	G5T5	
<a href="#"><u>Trifolium trichocalyx</u></a>	Monterey clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1	
<a href="#"><u>Triquetrella californica</u></a>	coastal triquetrella	Pottiaceae	moss		1B.2	S2	G2	
<a href="#"><u>Usnea longissima</u></a>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		4.2	S4	G4	
<a href="#"><u>Veratrum fimbriatum</u></a>	fringed false-hellebore	Melanthiaceae	perennial herb	Jul-Sep	4.3	S3	G3	
<a href="#"><u>Viola palustris</u></a>	alpine marsh violet	Violaceae	perennial rhizomatous herb	Mar-Aug	2B.2	S1S2	G5	



**Suggested Citation**

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