



Environmental Constraints Analysis

Fortuna Highway 101/Riverwalk Area Connectivity Project

May 2016

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1. Introduction

1.1 Project Summary

The Fortuna Highway 101/Riverwalk Connectivity Planning Study focuses on the 12th Street and Kenmar Road crossings of Highway 101, and includes an evaluation of the existing conditions, identification of deficiencies from Caltrans standards, and the development of conceptual alternatives intended to provide multi-modal mobility and accessibility for all users through both interchanges, with the goal of improving safety and ensuring the continued commercial viability of the Riverwalk Area. The results of the study will provide the foundation for future project development phases with the goal of implementation of improvement projects at the 12th Street and Kenmar Interchanges.

The overall objectives of the project are to:

- Provide improved accessibility and connectivity between the Downtown and the Riverwalk Area for all users
- Support growth of business in the Riverwalk and Downtown areas by increasing the capacity of the 12th Street and Kenmar Interchanges while considering planned commercial growth
- Support economic growth by developing strategies to improve access to the Riverwalk and Downtown areas
- Improve the safety at the Kenmar and 12th Street Interchanges

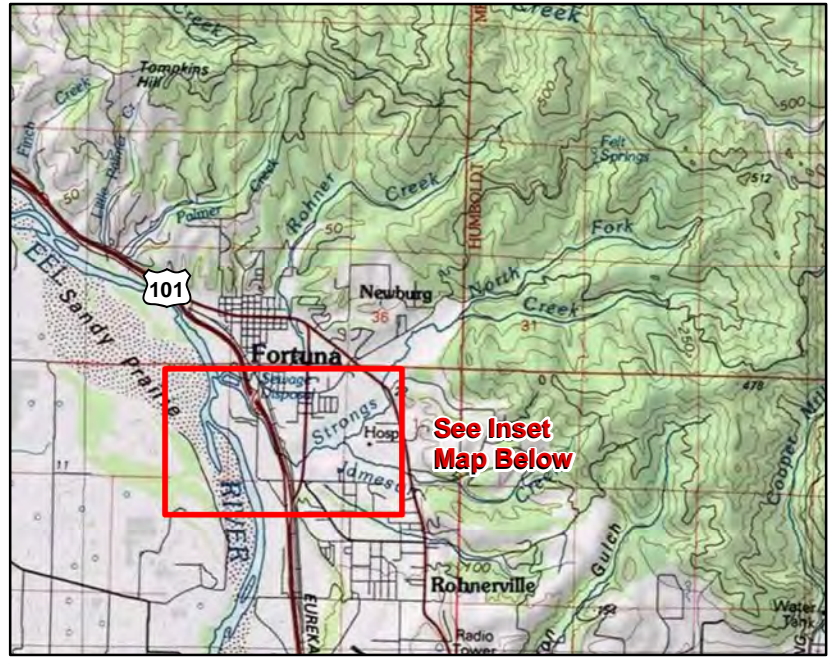
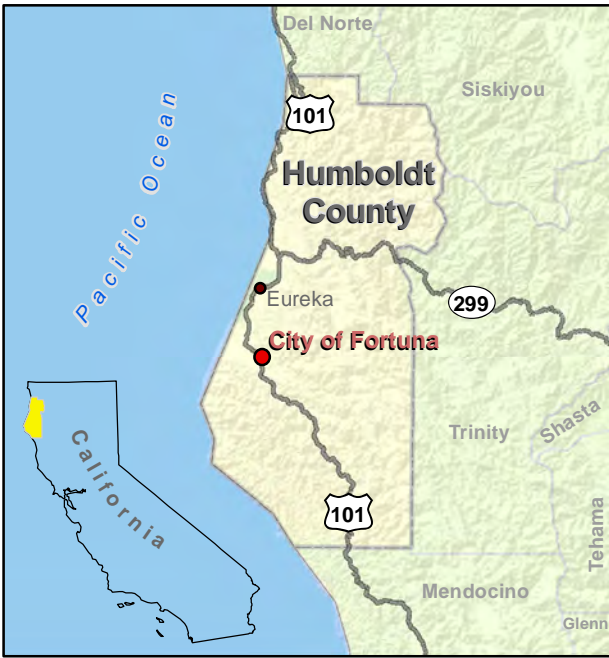
1.2 Purpose of the Report

This Environmental Constraints Analysis is intended to document the biological conditions/constraints within the Study Area. A reconnaissance-level site investigation of existing conditions was conducted throughout the study area in February 2016, to identify the presence or potential presence of biological resources listed under the Federal Endangered Species Act (ESA), the presence of wetlands and Waters of the US as regulated by the US Army Corps of Engineers (USACE), the presence or potential presence of species listed as endangered or threatened under the California Endangered Species Act (CESA) or considered a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW), or the potential for special-status plant species having a rare plant ranking as determined by the California Native Plant Society (CNPS) rare plant inventory, and to present the potential of sensitive habitats as listed by the CDFW. This report also discusses the necessary steps required for the project to comply with federal, state, and local regulatory environmental compliance requirements and provides basic permit information. No permits or environmental compliance documents were collected, initiated, or completed for this effort, nor were regulatory agencies contacted for additional information.

1.3 Location

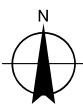
This Environmental Constraints Analysis is being undertaken in Fortuna, Humboldt County, California. Fortuna is approximately 14 miles south of Eureka and can be accessed from Highway 101. A vicinity map is included as Figure 1.

The project study boundary (PSB) covers approximately 35 acres around the Kenmar Road and 12th Street interchanges for Highway 101. The PSB is depicted in Figures 2a and 2b and 3, and these areas were analyzed to evaluate the likeliness of environmental features and potential project constraints or likelihood of permitting requirements.



 Project Areas

Paper Size 8.5" x 11" (ANSI A)
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Feet
Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 10N



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Highway 101, Fortuna Downtown and Riverwalk Area
Complete Streets and Connectivity Planning Study

Job Number 11109149
Revision A
Date 07 Apr 2016

Vicinity Map

Figure 1



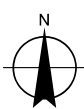
- | | | | | |
|----------------|-------------------|--------------|-------------------------|---------------------|
| Study Boundary | Potential Wetland | FH Valves | Drain Inlet; Curb Inlet | SS MH |
| Riparian | Strong's Creek | Water Valves | Headwall | SS Cleanout |
| | | Hydrant | Storm Water Mains | SS Gravity Main |
| | | Water Mains | | SS Pressurized Main |

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983

Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



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Biological Investigation

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Figure 2a

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

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Study Boundary



FH Valves



Drain Inlet; Curb Inlet



SS MH



Creek



Water Valves



Headwall



SS Cleanout



Hydrant



Storm Water Mains



SS Gravity Main



Water Mains



SS Pressurized Main

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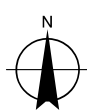
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Map Projection: Lambert Conformal Conic

Horizontal Datum: North American 1983

Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



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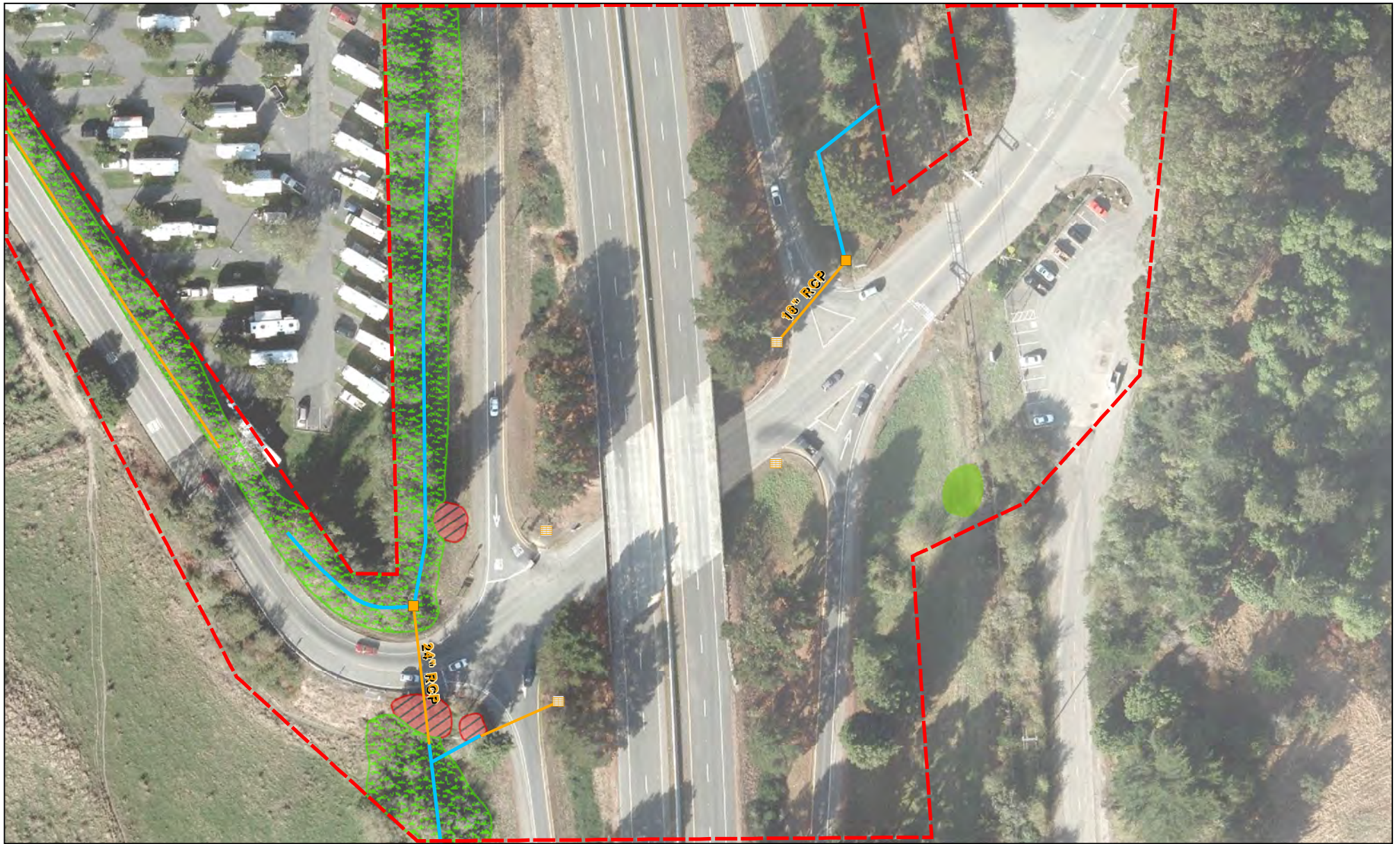
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Revision A
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Reconnaissance Level
Biological Investigation

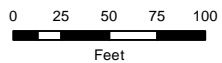
Figure 2b

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Paper Size 8.5" x 11" (ANSI A)



Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



Drain Inlet; Curb Inlet

Headwall

Storm Water Mains

Potential Wetland Ditch

Study Boundary

Potential Wetland

Redwoods

Riparian



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Reconnaissance Level Biological Investigation

Figure 3

G:\1111\11109149 HCAOG Hwy 101 Fortuna Downtown-Riverwalk\08-GIS\Maps\Figures\Recon_WetlandsHabitat\F3_Kenmar.mxd

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Data source: City of Fortuna GIS: Storm Drain, aerial imagery; GHD: wetland/habitat reconnaissance 2-29-2016 Created by: gldavidson

1.4 Overview of Study Area

The Study Areas are located in the western part of Fortuna, a city with a population of 11,926 as of the 2010 census. There are two distinct Study Areas located approximately one mile apart, and these are described in greater detail below.

The 12th Street PSB is an elongated irregularly shaped area oriented along the north-south centerline of 12th Street and Riverwalk Drive, and bisected by Highway 101 (Figure 2a and 2b). The area north of Highway 101 consists of paved roads and maintained grassy right of way with a few scattered ornamental trees, and is bordered by residential and commercial development. There are few natural features remaining in this section. South of Highway 101, Strong's Creek and associated riparian habitat makes up the southern end of the PSB, with a narrow area of shrubs and trees just to the north between Dinsmore Drive and 12th Street, and grassy swales with scattered Monterey cypress between the southern arc of 12th Street and Highway 101.

The Kenmar PSB is oriented generally northeast/southwest (Figure 3). The larger portion east of Highway 101 includes a steep slope with non-native eucalyptus at the extreme east end, with a parking lot immediately to the west. Continuing west, an inactive rail line runs through a series of mostly open areas of low herbaceous growth with scattered Monterey cypress. West of Highway 101 and associated ramps is an ephemeral ditch which has developed a riparian-like area dominated by dense shrub and sapling cover, and which includes a few redwoods of moderate size near the intersection of Riverwalk Drive and the Highway 101 ramps. The southwest limit of the PSB coincides with the top of a grade dropping down to the adjacent Eel River floodplain, which is not included in the PSB.

Wetland and riparian habitats are discussed in further detail below.

2. Methods

2.1 Research Methods

The initial analysis consisted of review of existing environmental literature and data results from database queries of potential on-site sensitive species which were evaluated using the Fortuna United States Geological Survey (USGS) 7.5 quadrangle. The database queries include the California Natural Diversity Database (CNDDDB) [CDFW February 2016]; the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants [CNPS February 2016]; and lists of special-status species and natural communities that may occur in the project area as provided by the U.S. Fish and Wildlife Service (USFWS) [USFWS, 2016].

Additional existing data was reviewed when available, such as soil and ecological maps and descriptions generated by the Natural Resources Conservation Service (NRCS) and wetlands mapping from USFWS National Wetlands Inventory (NWI) [USFWS 1987]. NWI maps are compiled using a variety of remote sensing data sources, including aerial photographs, infrared photography, and soils data. NWI maps do not necessarily represent an accurate extent of jurisdictional wetlands in the Study Area. Finally, the CalFlora database in conjunction with the Jepson Herbarium database was consulted for site specific species cross referencing for potential rare plants in the project vicinity. When available, Geographic Information System (GIS) data was overlaid with the PSB.

2.2 Environmental Reconnaissance Survey Methods

On February 20, 2016, GHD field staff performed a reconnaissance level investigation of environmental and biological resources within the two PSB's. The survey was meant to identify the potential for environmental impacts and to identify potential permits that would result from implementing the project. This field reconnaissance effort, focused on identifying the potential presence of wetland, riparian, and special-status plant species (listed as rare, threatened, endangered, or candidate for rare, threatened, or endangered species listing under the state or federal Endangered Species Acts, CNPS rare plant ranking, or of local importance) or habitats present within the proposed project trail segments. The project area topographic maps, aerial photography maps, the California Department of Fish and Wildlife CNDDDB and CNPS Rare Plant Inventory were consulted using the Fortuna quadrangle prior to and during the survey to determine potential sensitive species or habitat occurrence.

Field work was conducted by walking each of the proposed PSB units and visually documenting findings through photographs and notes. Each location with a potential wetland or areas potentially containing special status species and/or habitats, was noted. These areas would then be recommended for further investigations or protocol level surveys in order to fulfill potential permit requirements as described in further detail in Section 3 of this report.

The likelihood of certain permits increases in locations in which the project intersects certain features. For instance, the likelihood of a USACE Clean Water Act 404 and CDFW 1600 permit increases in locations in which the project crosses a blue line stream. Section 4 considers each permit, discusses the nature of the permit, and identifies the threshold triggers for each permit.

3. Results

3.1 Special Status Plants, Animals, & Habitats Literature Results

A compilation of flora and fauna obtained from the literature search can be found in Table 1 below. The combined list identifies six animal species and three plant species with a moderate or high potential to be present in the PSB. A list of federal endangered, threatened and candidate species for the Fortuna USGS quadrangle was downloaded from the web site of the USFWS Arcata Field Office on March 4, 2016 (Appendix A). The USFWS lists are often of a general nature and do not indicate presence, merely the need for further review. The CNDDDB Occurrence Report Rare Find 4 lists species potentially present in the project vicinity, and includes the Fortuna quadrangle (Appendix B). Several of these were subsequently excluded because of an absence of suitable habitat.

Table 1. Listed/Proposed Rare, Threatened and Endangered Species

Scientific Name	Common Name	Status	Habitat	Potential to Occur
<i>Antrozous pallidus</i>	Pallid bat	SSC	Dry rocky woodlands	Low, no suitable habitat
<i>Arborimus pomo</i>	Sonoma tree vole	SSC	Conifer forest	Low, no large stands of suitable habitat
<i>Pekania (Martes) pennanti</i>	Fisher	FC	Mature forest	None; no suitable habitat present
<i>Ardea herodias</i>	Great Blue Heron	None	Colonial nester, tall trees, marshes	Low, several miles to nearest known rookeries
<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover	FT	Beaches and dunes above high tide line, river gravel bars	None; no suitable habitat present
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	FT	Dense extensive riparian forest	Low; nearest documented recent records near Cock Robin Island
<i>Brachyramphus marmorata</i>	Marbled Murrelet	FT	Old-growth redwood and Douglas fir forest	None; no suitable habitat present
<i>Riparia riparia</i>	Bank Swallow	ST	Nests in vertical banks/cliffs along rivers	Low for nesting; known from the Eel near Fernbridge so nearby foraging

				is possible
<i>Strix occidentalis caurina</i>	Northern Spotted Owl	FT	Mature forest	None; no suitable habitat present
<i>Emys (Actinymys) marmorata</i>	Western pond turtle	SSC	Ponds, rivers, marshes	Moderate
<i>Rana aurora</i>	Northern Red-legged Frog	SSC	Emergent wetlands and stream margins, and nearby wet meadows and woods	High especially in riparian areas
<i>Rana boylei</i>	Foothill Yellow-legged Frog	SSC, federal proposed	Margins of shallow rocky streams and riffles	High; known to occur in the Eel and tributaries
<i>Oncorhynchus kisutch</i>	S. OR/N. CA Coho Salmon	FT	Rivers and tributaries	Moderate; historic records from Strong's Creek
<i>Oncorhynchus mykiss</i>	N. CA Steelhead	FT	Rivers and tributaries	High; recent records from the lower Strong's Creek watershed
<i>Oncorhynchus tshawytscha</i>	CA Coastal Chinook	FT	Rivers and larger tributaries	Moderate; present in Eel near Fortuna
<i>Spirinchus thalyichthys</i>	Longfin Smelt	FC, ST	Estuaries, may enter freshwater to spawn	Low; present in lower 4.5 miles of Eel, historic (1956) seasonal occurrence up to Van Duzen mouth

Important habitat features include Strong's Creek and an associated riparian corridor in the south and southwest portion of the 12th Street PSB, and several large individual redwoods in the western part of the Kenmar PSB. While these habitat features are not extensive, they could harbor sensitive animals or plants and have habitat and aesthetic value.

A number of plant species identified as rare by the CNPS occur in the Fortuna quadrangle; CEQA requires that these species be considered in the planning process, thus a protocol level study is recommended during the appropriate bloom period (Table 2). Appendix B contains the CNDDDB occurrence report. If rare species are located mitigation measures may be required. At least one of these species (Siskiyou checkerbloom) sometimes grows within maintained road right-of-way.

Table 2. Potential Rare Plant Occurrence and Bloom Periods

Scientific Name	Common Name	Rare Plant Rank	Bloom Time	Habitat	Likelihood to Occur
<i>Fissidens pauperculus</i>	Minute pocket moss	1B.2	n/a	Damp soil in dry stream beds and banks	Moderate
<i>Sidalcia malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	1B.2	May-August	Coastal scrub, coastal prairie, road cuts	Moderate
<i>Clarkia amoena</i> ssp. <i>whitneyi</i>	Whitney's farewell-to-spring	1B.1	June-August	Coastal bluff, coastal scrub	Moderate, based on a 1955 record from "west of Fortuna."
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	1B.2	April-August	Coastal scrub, coastal prairie	Low

4. Environmental Permits and Processes Discussion

4.1 California Environmental Quality Act

Review under the California Environmental Quality Act (CEQA) is required whenever a state or local government entity initiates a project, funds a project, or issues a permit decision. The CEQA document is prepared or overseen by a designated lead agency. An Initial Study determines the appropriate level of environmental review; for a project such as this one limited to relatively small portions of an urban fringe area but including a salmonid stream and associated riparian areas, there is a possibility that an Environmental Impact Report (EIR) would be required. However, if all identified impacts can be avoided or adequately mitigated, a Mitigated Negative Declaration (MND) may be adequate. The City of Fortuna would most likely be the CEQA lead agency for the project. Other likely agencies include the Humboldt County Association of Governments, Caltrans or other non-federal agencies with permitting authority over the project.

Compliance with the National Environmental Policy Act (NEPA) is required whenever there is federal involvement in the project. If the ultimate project includes federal funding, it would trigger NEPA analysis; in addition, federal involvement may also include approval or issuance of permits. If the project does not qualify for a Categorical Exclusion (CE) or Programmatic Categorical Exclusion (PCE), additional environmental documentation under NEPA may be necessary prior to project approval of funding by a federal agency. Caltrans would most likely be the NEPA lead agency for the project.

4.2 Other CEQA/NEPA Considerations:

From a CEQA/NEPA perspective, project segmentation may occur when the project as described and analyzed in a single CEQA or NEPA process does not encompass the entire project. Segmentation can occur when portions of a project that are dependent on other portions of the project to make them functional are evaluated in separate documents. An example would be if each interchange were analyzed in separate CEQA documents but then constructed simultaneously. In this example, the “entire project” would consist of both interchanges, even though the project was analyzed in two separate documents and therefore “segmented.” However, if the components could not function without the other, then these projects must be analyzed in the same document. Alternatively, if the projects are analyzed in separate documents, they must be analyzed in the cumulative impacts section of the document. Therefore, if the two interchanges are considered a single project, then the document should address all project components.

If a project has reasonably foreseeable additional components, they must be analyzed concurrently as part of a single project. The flaw of segmentation is that it can divide larger projects into smaller components, which, when viewed independently, may not lead to the identification of the full range and intensity of impacts resulting from the entire project when viewed as a whole. Linear infrastructure network projects (e.g. transmission lines, pipe networks, roads, trails) may present a special challenge when considering whether a project is in danger of being segmented, as there may be no clear cut method of determining where an individual project starts and ends - and

whether it should be analyzed as part of a larger project or as an individual action simply occurring on a larger network. Following court decisions, the standard for determining whether a road project is an individual action warranting individual CEQA/NEPA analysis is if it is: of substantial length; and is between logical termini, such as population centers or major crossroads, etc; and has independent utility.

4.2.1 Cultural Resources

Preparation of CEQA/NEPA documents would trigger a need for cultural resources studies in at least some portions of the PSB. Reconnaissance level studies and inclusion of reasonable mitigation measures would likely be suitable for most areas, unless those studies identify concentrations of cultural resources.

4.2.2 Other Special Studies for CEQA/NEPA

CEQA and NEPA require special studies for key resources that may be impacted by the project. For instance, the Protocol level surveys for special-status plants and animals would serve as special studies. Other special studies that could be required include aesthetic studies, air quality studies, geologic studies, hazardous materials studies, noise studies, and traffic studies. At this time, it is unknown if any of these studies would be required. However, it is possible that special studies could be required for parts of the project. For example, geotechnical surveys may be required in the creek crossing locations.

4.3 Permits

4.3.1 U.S. Army Corps of Engineers (USACE) Section 404 Nationwide Permit

The USACE regulates discharges of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). The project may result in unavoidable fill of some jurisdictional wetlands or Waters of the U.S. during project implementation. There are also potential stream crossings, although the project will likely be designed to avoid or minimize impacts to wetlands or waters of the U.S. However, if filling of wetlands or waters of the U.S. are unavoidable, the project will require a USACE Section 404 Permit. The project may qualify for a streamlined USACE Nationwide Permit. Prior to authorizing wetland fill under Section 404, a wetland delineation must be submitted and verified by the USACE. Impacts that cause a loss of jurisdictional wetland will require an approved wetland mitigation and monitoring plan (MMP), accompanied by an adaptive management plan and long term maintenance plan.

A formal wetland delineation is recommended during the planning phase of any segment which crosses a potential wetland identified in this report, and for those areas where ditches (potential Waters of the U.S.) occur adjacent to the roads, in order to verify potential wetlands or Waters of the U.S. and to request a jurisdictional determination. Wherever ground disturbing work would occur below the ordinary high water mark (OHWM) of a stream crossing, a delineation and 404 permit would also be required. Potential wetlands and waters of the U.S. are shown on Figures 2a and 2b and 3, and include Strong's Creek, several drainage ditches, and a few small degraded wet depressions and swales.

4.3.2 Regional Water Quality Control Board (RWQCB)

Section 401 Water Quality Certification and National Pollutant Discharge Elimination System (NPDES) Requirements: Pursuant to section 401 of the federal CWA, projects that require a

USACE permit for discharge of dredge or fill material must obtain water quality certification to confirm compliance with state water quality requirements. If the project results in unavoidable fill of wetlands or Waters of the U.S., Section 401 Certification from the RWQCB will be required. The RWQCB may encourage a CRAM evaluation of impacted habitats and mitigation for compensation of impacts.

The CWA requires that any discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge complies with a NPDES permit. These regulations require that discharges of stormwater from construction projects that cause one or more acres of soil disturbance must be in compliance with an NPDES permit. If the project disturbs more than one acre of soil, it must comply with the construction general stormwater permit issued by the State Water Resource Control Board. The construction general permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Additionally, the RWQCB may take jurisdiction on a variety of drainage ditches and swales identified in the PSB and a formal delineation of the features will be required throughout the PSB.

4.3.3 California Department of Fish & Wildlife Section 1602

Under Fish and Game Code Section 1602 (Streambed Alteration), the CDFW has jurisdiction over proposed activities that may substantially modify a river, stream, or lake. The PSB includes portions of Strong's Creek and several shallow ditches, and depending on final design direct or indirect impacts could occur in some of these locations. Additionally, CDFW jurisdiction extends at least to the top of bank and may sometimes include adjacent riparian zones. As a result, a 1600 Lake and Streambed Alteration Agreement including special conditions to avoid or minimize impacts is anticipated.

4.3.4 Federal Endangered Species Act Compliance (Protocol Level Surveys and Biological Assessments)

Based on available knowledge at this time, the project is not expected to result in any adverse impacts to federally threatened or endangered species or habitats, and GHD does not anticipate the need for formal Section 7 ESA consultation (this assumes no instream work). However, when a USACE permit is required for impacts to jurisdictional wetlands or other waters and the project has the potential to cause adverse impacts to federally-listed threatened or endangered species, the USACE must initiate consultation with the USFWS and/or the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the ESA. Although unlikely for the proposed project, because no impacts to threatened, or endangered species are currently anticipated, if future studies determine that a listed species is present or if a species is added to the list and is present in the area, and if adverse effects are possible, then informal or formal consultation, including preparation of a Biological Assessment, may be required.

Potential issues include salmonids (steelhead, coho, chinook) which occur in the Eel River and tributaries including Strong's Creek. If project activities require dewatering of any portion of the creek, or if there is a possibility of sediment input to the stream or any other potential instream impact, then Section 7 consultation including preparation of a Biological Assessment may be necessary.

There is no documentation of terrestrial listed species in the project study boundary; however, if they are found to occur near the PSB, a variety of requirements ranging from pre-construction protocol surveys to seasonal noise and visual buffers during construction would be triggered, depending on distance to the nest.

4.3.5 California Endangered Species Act (Protocol Level Surveys and Biological Assessments):

The California Endangered Species Act (CESA) requires consultation with the CDFW when preparing CEQA documents to ensure that the lead agency actions do not jeopardize the existence of listed species.

A number of state listed or state sensitive species could potentially occur close to the PSB including bank swallow, northern red-legged frog, foothill yellow-legged frog, western pond turtle, and others. However no site-specific surveys are available at this time.

By incorporating the development of reasonable avoidance or mitigation measures in the CEQA document, such as seasonal work windows and buffer zones around bird and bat habitats and native migratory bird nests during the nesting season and pre-construction surveys for other species impacts can likely be reduced to less than significant. However, a thorough review is recommended, especially where wetland, stream, drainage ditches, or riparian impacts may occur.

4.3.6 Migratory Bird Treaty Act (Avian Surveys)

The Migratory Bird Treaty Act (MBTA) protects all native species of birds. USFWS has statutory authority to enforce the MBTA. To avoid impacts to nesting birds it is recommended that to the extent practical, construction activity occur outside the nesting season (approximately March 15 to August 15 in Humboldt County). This will be most crucial near riparian areas and large trees. If it is not possible to avoid the nesting season then avian surveys should occur within seven days prior to disturbance, and if active nests are identified then the biologist shall establish appropriate buffers. For common species typical of urban sites these are often very small, although buffers for raptors or special-status birds can be much larger (100 to 500 feet). Additional protections for birds or requirements for avoidance are found in the Fish and Game Code and are often a part of CEQA compliance and mitigation measures.

4.3.7 California Department of Transportation (Caltrans)

Encroachment Permits (EP) and/or other agreements may be required for use of or alterations to any area within a Caltrans right-of-way.

A Humboldt County EP will be required if any work encroaches into County right-of-way. Additionally, a Humboldt County grading permit will need to be obtained for grading work in the County right-of-way which exceeds the thresholds identified in the County Grading Ordinance.

4.3.8 California State Lands Commission

The State Lands Commission (SLC) has jurisdiction over sovereign public lands, including the beds of California's naturally navigable rivers, lakes and streams, as well as the state's tide and submerged lands along the state's more than 1,100 miles of coastline, extending from the shoreline to three miles offshore. The location and extent of sovereign lands are generally defined by reference to the ordinary high and low water marks of tidal and navigable waterways. Because the boundaries of these lands are often legally based upon the last natural extent and location of the subject water body, they are not necessarily apparent from a present day site inspection, and substantial research is needed to define the extent of the state's ownership interests. Because the project crosses tributaries associated with the Eel River, further inquiry regarding the extent of SLC's jurisdiction should be conducted.

4.3.9 Permit Summary

In summary, a variety of permits and related environmental review would be necessary for project planning and design. In general, agencies are more supportive of projects when they are a part of the early planning and collaboration process. Currently, the proposed project would occur mostly within already disturbed areas, and environmental impacts are most likely if design features cross wetland or riparian areas. Any work within the identified creek crossings or wetlands would also trigger various permit requirements. The present document is intended to identify potential permits and environmental planning considerations at a project-wide scale.

5. Conclusions

5.1 Potential Permits and Environmental Constraints

The project area is shown on Figures 1 through 3. Appendix C contains representative photographs of the different habitats or constraints observed during the field reconnaissance effort.

The project will require a formal wetland delineation following USACE protocol to identify impacts to wetland habitat or waters of the U.S.; particularly in the areas identified as potential wetland, ditch, and stream crossings. Parts of the PSB contains what appear to be drainage ditches that could fall under either the USACE and/or RWQCB jurisdiction. The types of ditches identified in Figures 2a and 2b and 3 and shown in photographs in Appendix C include drainage ditches with evident flow paths connected by culverts, drainages comprised of hydrophytic vegetation, and swales.

Potential biological surveys required for implementing this proposed project include, at a minimum, a protocol level intensive botanical site inventory of vascular plant species, with emphasis on species identified in the database queries. This survey will need to be conducted at the appropriate season(s) to locate flowering individuals of listed species.

A few state special concern wildlife species have been reported within the general project vicinity, and others could occur although no recent field data is available for the PSB. Federally listed salmonids have been reported in other parts of Strong's Creek in the past and are presumed to be present. The PSB also contains several large redwoods and other large trees and other viable habitat for migratory nesting birds as well as riparian habitat. Therefore, these areas may need to be further assessed with CEQA special studies in order to identify and offset adverse impacts to the potential fauna along these routes. Additional non-biological studies may be required by CEQA/NEPA.

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Appendices

Appendix A (USFWS Listed/Proposed Threatened and Endangered Species for the Fortuna Quad)

Candidate species included

12th Street Interchange

IPaC Trust Resources Report

Generated March 04, 2016 03:19 PM MST, IPaC v3.0.0

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.

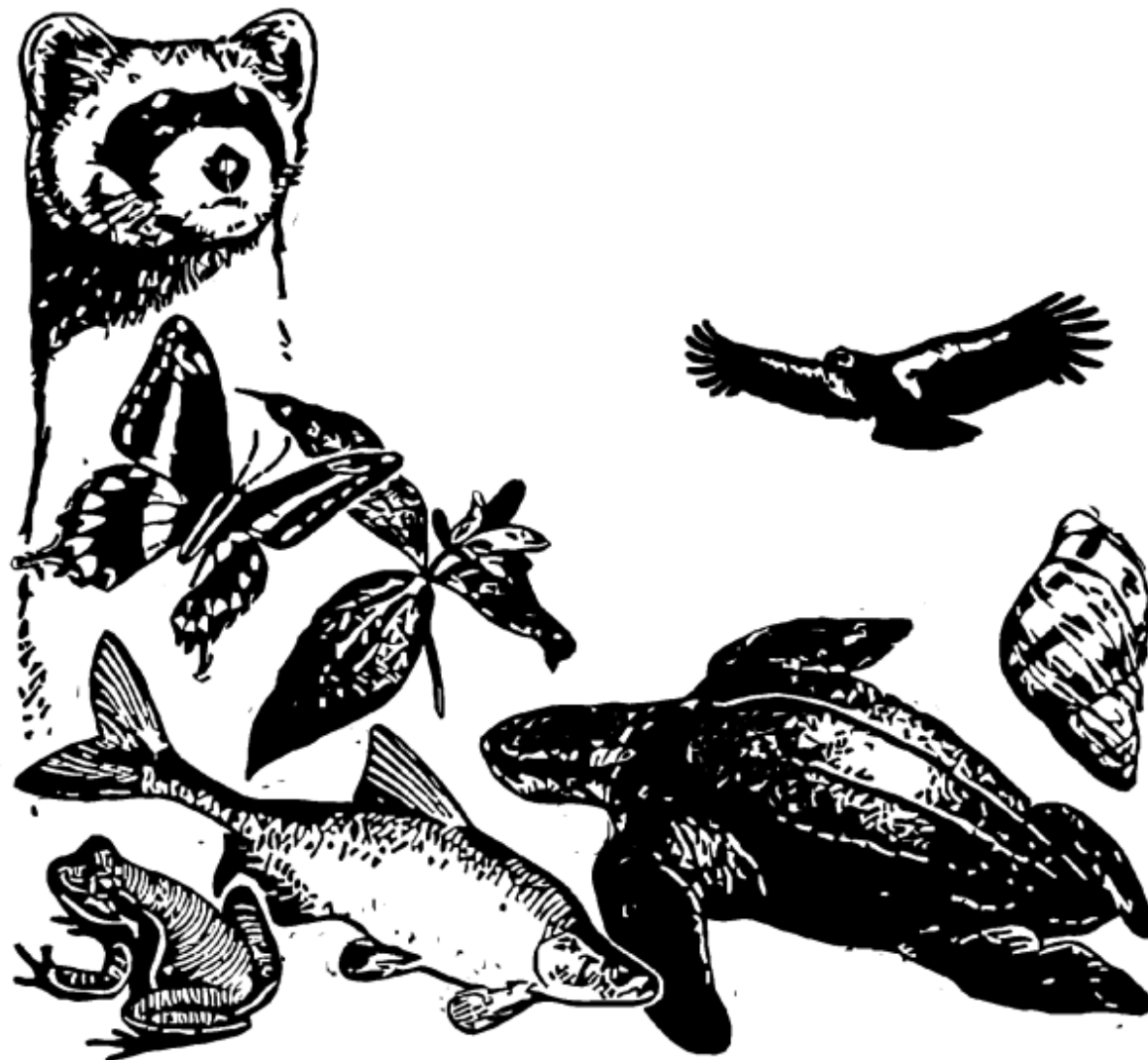


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- Project Description [1](#)
- Endangered Species [2](#)
- Migratory Birds [4](#)
- Refuges & Hatcheries [7](#)
- Wetlands [8](#)

U.S. Fish & Wildlife Service

IPaC Trust Resources Report



NAME

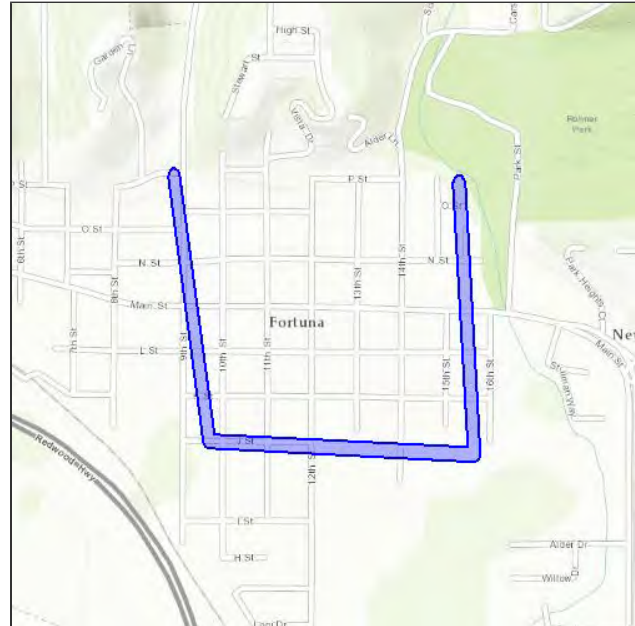
12th Street Interchange

LOCATION

Humboldt County, California

IPAC LINK

<http://ecos.fws.gov/ipac/project/3IDEK-YDXKJ-BBLBW-TO465-QKA2Y4>



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Birds

Marbled Murrelet *Brachyramphus marmoratus* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08C

Northern Spotted Owl *Strix occidentalis caurina* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B08B

Western Snowy Plover *Charadrius alexandrinus nivosus* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B07C

Yellow-billed Cuckoo *Coccyzus americanus* Threatened

CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06R

Flowering Plants

Beach Layia *Layia carnosa* Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q34T

Menzies' Wallflower *Erysimum menziesii* Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q29W

Western Lily *Lilium occidentale* Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1Y0

Mammals

Fisher *Martes pennanti* Proposed Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A0HS

Critical Habitats

This location overlaps all or part of the critical habitat for the following species:

Steelhead Critical Habitat Final designated

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E08D#crithab

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.^[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>

The following species of migratory birds could potentially be affected by activities in this location:

Allen's Hummingbird <i>Selasphorus sasin</i> Season: Breeding https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0L1	Bird of conservation concern
Bald Eagle <i>Haliaeetus leucocephalus</i> Year-round https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008	Bird of conservation concern
Burrowing Owl <i>Athene cunicularia</i> Year-round https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC	Bird of conservation concern
Calliope Hummingbird <i>Stellula calliope</i> Season: Breeding https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0K3	Bird of conservation concern

Fox Sparrow <i>Passerella iliaca</i> Season: Wintering	Bird of conservation concern
Lewis's Woodpecker <i>Melanerpes lewis</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ	Bird of conservation concern
Long-billed Curlew <i>Numenius americanus</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S	Bird of conservation concern
Marbled Godwit <i>Limosa fedoa</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL	Bird of conservation concern
Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0AN	Bird of conservation concern
Peregrine Falcon <i>Falco peregrinus</i> Year-round https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU	Bird of conservation concern
Purple Finch <i>Carpodacus purpureus</i> Year-round	Bird of conservation concern
Short-billed Dowitcher <i>Limnodromus griseus</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JK	Bird of conservation concern
Short-eared Owl <i>Asio flammeus</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD	Bird of conservation concern
Snowy Plover <i>Charadrius alexandrinus</i> Season: Breeding	Bird of conservation concern
Western Grebe <i>aechmophorus occidentalis</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA	Bird of conservation concern
Whimbrel <i>Numenius phaeopus</i> Season: Wintering https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JN	Bird of conservation concern
Willow Flycatcher <i>Empidonax traillii</i> Season: Breeding https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0F6	Bird of conservation concern
Yellow Warbler <i>dendroica petechia</i> ssp. <i>brewsteri</i> Season: Breeding https://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EN	Bird of conservation concern

Red Knot *Calidris canutus* ssp. *roselaari*

Season: Wintering

https://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0G6

Bird of conservation concern

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands in this location

Appendix B (CNDDDB Occurrence Report)

Fortuna Quad



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



Query Criteria: Quad is (Fortuna (4012452))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	None	G2G3	S1S2	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Arborimus pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Clarkia amoena ssp. whitneyi</i> Whitney's farewell-to-spring	PDONA05025	None	None	G5T1	S1	1B.1
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2
<i>Gilia capitata ssp. pacifica</i> Pacific gilia	PDPLM040B6	None	None	G5T3T4	S2	1B.2
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Montia howellii</i> Howell's montia	PDPOR05070	None	None	G3G4	S3	2B.2
<i>Oncorhynchus clarkii clarkii</i> coast cutthroat trout	AFCHA0208A	None	None	G4T4	S3	SSC
<i>Polemonium carneum</i> Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
<i>Rana aurora</i> northern red-legged frog	AAABH01021	None	None	G4	S3	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sidalcea malviflora ssp. patula</i> Siskiyou checkerbloom	PDMAL110F9	None	None	G5T2	S2	1B.2
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC

Record Count: 19

Appendix C (Site Photographs)



Strong's Creek and associated riparian area



Riverwalk Drive bridge, looking east toward Hwy 101



Dinsmore Drive north of bridge, with riparian edge on left



Dinsmore Drive north of Riverwalk Drive, looking north. Riparian on left, willow and Monterey cypress on right



Southbound Hwy 101 exit ramp at 12th Street, looking NE



Potential wetland swale within area shown in photo above, looking NW with 12th Street in background



Eucalyptus on slope east of Kenmar Rd. interchange and parking lot



Parking lot, looking west toward Hwy 101 with inactive rail line in middle ground



Potential wetland south of Kenmar, between rail line and Hwy 101 ramp, looking south



Ditch/potential wetland north of Kenmar and east of Hwy 101, looking north



Ephemeral ditch north of Kenmar and west of Hwy 101, with adjacent riparian area



Degraded riparian habitat north of Kenmar/Riverwalk and west of Hwy 101



Redwood west of Hwy 101 and north of Kenmar/Riverwalk



Ephemeral ditch flowing toward Eel River floodplain, south of Kenmar/Riverwalk and west of Hwy 101. Note redwood in top right.

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