

Natural Environment Study (Minimal Impacts)

**Martinez Bay Trail Project Phase II
Contra Costa County, California
January 2024**

**STATE OF CALIFORNIA
Department of Transportation**

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1. Introduction

Sequoia Ecological Consulting, Inc. (Sequoia) has prepared this Natural Environment Study (Minimal Impact) (NES (MI)) for the proposed Martinez Bay Trail Project Phase II Project, a proposed segment of the San Francisco Bay Trail, located in the City of Martinez, in Contra Costa County (Appendix A: Figure 1). The purpose of this report is to describe the biological resources present within project area, to identify sensitive biological resources known to occur in the project region, and to evaluate the potential for sensitive resources to occur within the project area. This NES (MI) has been developed in support of preparation of an Environmental Document in compliance with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

1.1 Project History

In May 2003, an Initial Study/Mitigated Negative Declaration (City of Martinez 2003) was prepared and adopted by the City of Martinez (City) for approval of the Martinez Bay Trail Phase II Project (hereafter referred to as the Original Project). The Original Project was proposed as part of the larger San Francisco Bay Trail (SFBT) which is being developed by the Association of Bay Area Governments in conjunction with local agencies. The Original Project was intended to begin at the East Bay Regional Park District (EBRPD) Nejedly Staging Area and to provide a link to the SFBT at the EBRPD Martinez Regional Shoreline parking lot. The Original Project was approved in 2003, a Joint Aquatic Resources Permit Application was completed, and permits were obtained for the project in 2003-2004. Approximately 700 feet of the first phase of the trail from the Nejedly Staging Area to the Union Pacific Railroad (UPRR) right-of-way was subsequently built. The remainder of the project was put on hold until an easement was granted by UPRR for the EBRPD to construct the remainder of the Phase II project. The original Memorandum of Understanding (MOU) between UPRR and EBRPD was signed in 1993, and the Amended and Restated MOU was agreed to on May 3, 2016. This MOU provides recreational trail easements over railroad property, and grants the EBRPD a longitudinal, non-exclusive easement for trail along the UPRR right-of-way easterly to and then across Berrellesa Street.

The Original Project was approved in 2003 with the City of Martinez as the Lead Agency. EBRPD has since assumed primary responsibility for the current Martinez Bay Trail Phase II Project (hereafter referred to as the proposed project). EBRPD, in coordination with the City, is now finalizing project design and updating previously obtained permits in order to construct the proposed project. The proposed project includes minor modifications and as the responsible agency, EBRPD is finalizing the design and providing funding for construction. As a result, EBRPD is filing an Addendum to the previously approved Mitigated Negative Declaration (MND) for review and approval by the EBRPD Board of Directors. The Addendum evaluates whether modifications/refinements to the proposed project would result in any new or substantially more significant effects or require any new mitigation measures not identified in the 2003 MND.

As in the Original Project, the proposed project includes improvements to construct approximately 3,100 feet of trail including the addition of a crossing of the UPRR alignment at Berrellesa Street. Due to the similarities in alignment, project plans, needed work efforts, location, and environmental conditions, the elements of the currently proposed project have been previously analyzed in the 2003 MND as they were needed to implement the Original Project. The proposed project does include upgrades to the existing railroad crossing at Berrellesa street to meet current California Public Utilities Commission (CPUC) standards and UPRR requirements. This would include removal and replacement of existing gate arms, and enhanced signage, striping and safety improvements for the UPRR crossing. These enhancements have been designed to preserve the functionality of the railroad. In addition, the proposed project would result in paving of an approximately 700-foot portion of trail from the Nejedly Staging Area to the UPRR right-of-way. This section of trail was originally approved to be paved but was instead constructed with aggregate base and is now partly overgrown with upland ruderal vegetation. The Addendum also found that the mitigation that has already been implemented to offset impacts on wetlands was completed and is considered to be appropriate to offset the lost wetland habitat.

1.1.1 Project Purpose and Need

The goal of this project is to expand on the existing SFBT layout and to provide pedestrian traffic a safe means of transportation along the UPRR right-of-way, connecting the Nejedly Staging Area to the Martinez Regional Shoreline.

1.2 Project Description

The proposed project is located in the same area and follows the Original Project alignment. The proposed project includes approximately 3,100 feet of paved trail that will provide connectivity between the Nejedly Staging Area at Carquinez Scenic Drive and the SFBT at EBRPD Martinez Regional Shoreline parking lot and will complete a link planned for by the SFBT Plan. The SPBT Plan consists of a 400-mile regional network of bicycle and hiking trails along the shoreline areas of San Francisco and San Pablo bays. Local cities, counties, and park districts along the trail network have worked closely with the Association of Bay Area Governments in developing the Bay Trail Plan. The proposed project is being developed and will be maintained by the EBRPD. A portion of the trail is located in an easement on the UPRR, and within jurisdictional areas of the San Francisco Bay Water Quality Control Board (SFBWQCB), Bay Conservation and Development Commission (BCDC), California Department of Fish and Wildlife (CDFW), and U.S. Army Corps of Engineers (USACE). The proposed project will include an update to agreements and approvals from regulatory agencies previously obtained in 2003-2004.

2. Study Methods

This chapter summarizes the findings of the biological study area (BSA). The purpose of this chapter is to document biological resources in and within five miles of the BSA, to evaluate the potential of habitats to support special-status plant and animal species and to identify any adverse effects from the project on biological resources.

2.1 Regulatory Requirements

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) provides protection for federally listed endangered and threatened species and their habitats. A project may obtain permission to take federally listed species in one of two ways: a Section 10 Habitat Conservation Plan (HCP) issued to a non-federal entity, or a Section 7 Biological Opinion from the U.S. Fish and Wildlife Service (USFWS) and/or the National Oceanic and Atmospheric Administration (NOAA) issued to another federal agency that funds or permits an action (e.g., USACE). Under either Section of the FESA, adverse impacts to protected species are avoided, minimized, and mitigated. Both cases require consultation with the USFWS and/or National Marine Fisheries Service (NMFS), which ultimately issues a Biological Opinion determining whether the federally listed species may be incidentally taken pursuant to the proposed action and authorizing incidental take.

Section 7 of FESA requires that federal agencies develop a conservation program for listed species (FESA 7(a)(a)) and that they avoid actions that will jeopardize the continued existence of the species or result in the destruction or adverse modification of the species' designated critical habitat (FESA 7(a)(2)). FESA Section 9 prohibits all persons and agencies from take of threatened and endangered species (though the prohibition on taking listed plants only applies to plants taken from "areas under Federal jurisdiction" or plants taken "in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law"). Those who violate this mandate face civil and criminal penalties, including civil fines of up to \$25,000 per violation, as well as criminal penalties of up to \$50,000 and imprisonment for one year. Section 10 of FESA regulates a wide range of activities affecting fish and wildlife designated as endangered or threatened and the habitats on which they rely. Section 10 prohibits activities affecting these protected fish and wildlife species and their habitats unless authorized by a permit from USFWS or NMFS. These permits may include incidental take permits, enhancement of survival permits, or recovery and interstate commerce permits. HCPs under Section 10(a)(1)(B) provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend.

HCPs are required as part of an application for an incidental take permit under Section 10. They describe the anticipated effects of the proposed take, how those impacts will be minimized or mitigated, and how the HCP will be funded.

2.1.2 Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) (16 USC §703–711), as administered by the USFWS, makes it unlawful to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export at any time, or in any manner, any migratory bird, or any part, nest, or egg of any such bird.” This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs.

2.1.3 Bald and Golden Eagle Protection Act of 1940

The Bald and Golden Eagle Protection Act (BGEPA; 16 USC. 668-668c) prohibits anyone from taking, possessing, or transporting a bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), or the parts, nests, or eggs of such birds without prior authorization. This includes inactive nests as well as active nests. Take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb. Activities that directly or indirectly lead to take are prohibited without a permit.

2.1.4 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act establishes guidelines to assist the Regional Fishery Management Councils and the Secretary of Commerce in the description and identification of Essential Fish Habitat (EFH) in fishery management plans, the identification of adverse effects to EFH, and the identification of actions required to conserve and enhance EFH. This Act requires NMFS to protect EFH for those fish species regulated under the federal Fisheries Management Plan. NMFS requires any federal agencies to consult with NMFS on all actions that could adversely impact EFH.

2.1.5 Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 404: Gives the USACE jurisdiction over fill materials in essentially all water bodies, including wetlands. All federal agencies are to avoid impacts to wetlands whenever there is a practicable alternative. Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands).

Section 401: Requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards

(RWQCBs) administer the certification program in California. The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

2.1.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act expands the enforcement authority of the SWRCB and is becoming more prominent on projects involving impacts to isolated waters of the state (non-404/401 waters). The RWQCB regulates waters of the state impacts with a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending on the characteristics of the waterway and the level of impact.

2.1.7 Executive Order 11990 – Protection of Wetlands

Executive Order 11990 established a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The U.S. Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this direction. On federally funded projects, impacts on wetlands must be identified. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding. Additional requirement is to provide early public involvement in projects affecting wetlands. The Federal Highway Administration (FHWA) provides technical assistance and reviews environmental documents for compliance.

2.1.8 Executive Order 13112 – Invasive Species

On February 3, 1999, Executive Order 13112 was signed requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the state’s invasive species list, maintained by the Invasive Species Council of California, to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project.

Under the Executive Order, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the U.S. or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

2.1.9 California Environmental Quality Act

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a proposed discretionary project that the agency

will carry out, fund, or approve. Any significant impact must be mitigated to the extent feasible, below the threshold of significance.

2.1.10 California Fish and Game Code

2.1.10.1 Sections 1600-1616: Lake or Streambed Alteration Agreement

The CDFW regulates activities within watercourses, lakes, and in-stream reservoirs pursuant to Sections 1600-1616. Under Section 1602 of the California Fish and Game Code (CFGC)—often referred to as the Lake or Streambed Alteration Agreement (LSAA)—the CDFW regulates activities that would alter the flow or change or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, or lake. Each of these activities requires a Section 1602 permit. Section 1602 requires the CDFW to be notified of any activity that might affect lakes and streams. It also identifies the process through which an applicant can come to an agreement with the state regarding the protection of these resources, both during and following construction.

2.1.10.2 Sections 1900-1913: Native Plant Protection Act

The Native Plant Protection Act (NPPA) includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the NPPA includes those listed as rare, threatened, and endangered under the California Endangered Species Act (CESA). The NPPA provides limitations that no person would import into the state—or take, possess, or sell within the state—any rare, threatened, or endangered native plant, except in compliance with provisions of the NPPA. Where individual landowners have been notified by the CDFW that rare, threatened, or endangered plants are growing on their land, the landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare, threatened, or endangered native plant material.

2.1.10.3 Sections 2080-2081: California Endangered Species Act

The CDFW is responsible for administering the CESA. Section 2080 of CFGC prohibits take of any species that the Fish and Wildlife Commission determines to be an endangered species or a threatened species. However, CESA does allow for take that is incidental to otherwise lawful development projects. Sections 2081(b) and (c) of CESA allow the CDFW to issue an incidental take permit for a state listed threatened and/or endangered species only if specific criteria are met (i.e., the effects of the authorized take are minimized and fully mitigated). The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.

2.1.10.4 Sections 2800-2835: Natural Community Conservation Plant Act

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (CFGF Sections 2800–2835) established the Natural Community Conservation Planning (NCCP) program for the protection and perpetuation of the state’s biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with the CESA.

2.1.10.5 Section 3500: Nesting Birds

CFGF Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by the CFGF or any regulation made pursuant thereto. CFGF Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that elements of a project (specifically vegetation removal or construction near nest trees) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, which may be subject to approval by the CDFW and/or the USFWS.

2.1.10.6 Sections 3500, 4700, 5050, and 5500: Fully Protected Species, Species of Special Concern, and Non-Game Mammals

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. CFGF sections (birds at 3503 and 3511, mammals at 4150 and 4700, amphibians and reptiles at 5050, and fish at 5515) dealing with “fully protected” species state that these species “may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species;” however, take may be authorized for necessary scientific research.

California Species of Special Concern are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation is intended to result in special consideration for these animals by CDFW, project proponents, consultants, among others, and is also intended to encourage collection of additional information on these species and risks to their persistence. Although these species are not listed under the CESA or FESA and are afforded no special legal status, they are provided special consideration under the CEQA during project review.

Sections 4150-4155 of the CFGC protects non-game mammals, including bats. Section 4150 states “A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or furbearing mammal is a non-game mammal. Non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. Bats are classified as a non-game mammal and are protected under the CFGC.

2.2 Studies Required

2.2.1 Literature Search

Prior to performing the field survey, Sequoia performed a desktop review of available literature to identify special-status plants, animals, and habitats reported to occur in the vicinity of the BSA. This included a 5-mile search of the CDFW California Natural Diversity Database (CNDDDB; CDFW 2023); a review of the Benicia U.S. Geological Survey (USGS) 7.5-minute quadrangle (quad); search of the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2023); USFWS’ Information for Planning and Consultation (IPaC; USFWS 2023a) system; NOAA’s NMFS species list (NMFS 2023); and USFWS’ National Wetlands Inventory (NWI; USFWS 2023b). Available aerial photography and relevant literature on listed species with potential to occur was also included in this review.

2.2.2 Survey Methods

Sequoia senior biologist, Dan Muratore, conducted a biological survey of the BSA on December 14, 2023. The area was surveyed outside of blooming periods for target list plant species, which should be considered a constraint. A reconnaissance habitat assessment of the BSA was performed to assess general and dominant vegetation types, aquatic resources, suitable habitat for special-status species, and species present. The purpose of the desktop review and field survey was to re-validate and/or update findings of the Biological Resources Assessment (BRA) authored by Swaim Biological, Inc. (May 2020).

3. Results: Environmental Setting

3.1 Description of the Existing Physical and Biological Conditions

3.1.1 Study Area

The BSA for the project is defined as the project footprint, or direct construction area, and a 100-foot buffer surrounding the project’s footprint. This includes potential temporary, permanent, direct, indirect, and cumulative effects from the project. Direct impacts are impacts caused directly by the action (i.e., project-related activities). Indirect impacts are impacts that occur later in time or farther removed in distance by project-related activities. Cumulative impacts are impacts that are incremental and a combination or interaction of past, present, and/or future impacts.

The BSA includes the direct construction area and the land adjacent to the project, including access and staging areas. The BSA primarily consists of paved and gravel surfaces, ruderal (weedy) vegetation, fresh or brackish marsh vegetation, oak woodland, eucalyptus groves, and disturbed barren ground.

3.1.2 Physical Conditions

The BSA is located in the City of Martinez, California. The elevation ranges from 10 to 62 feet above sea level. The topography is moderately flat with a slight decrease in slope from the Nejedly Staging Area to the Martinez Regional Shoreline. The climate in the vicinity of the BSA is consistent with the Mediterranean climate of the San Francisco Bay Area, which typically features hot, dry summers and relatively cool, wet winters. The BSA occurs within a predominately disturbed habitat and includes an unnamed ephemeral waterway which runs along the Nejedly Staging Area towards the shoreline.

3.1.3 Biological Conditions

The BSA is dominated by ruderal vegetation, fresh or brackish marsh, oak woodland, eucalyptus groves, and disturbed barren ground. The project is located along a UPRR right-of-way and includes a vegetated stretch of EBPRD property connecting the right-of-way to the Nejedly Staging Area.

3.1.4 Habitat Connectivity

The BSA provides habitat connectivity to surrounding EBPRD property; however, it is segmented by urban development and paved roadways.

3.2 Regional Species and Habitats and Natural Communities of Concern

Special-status plant and animal species have been given recognition by state and/or federal agencies due to a perceived or documented decline in the species' population size or geographic range. Certain vegetation types or habitats are considered to have special-status because they have limited distribution or the potential to support special-status plant and animal species. For the purposes of this document, Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); Bird of Conservation Concern (BCC); State Endangered (SE); State Threatened (ST); Fully Protected (SFP); State Rare (SR); State Species of Special Concern (SSC); and CNPS Rare Plant Ranks 1-3 were reviewed due to their eligibility under CESA/FESA. For each species, a site analysis was performed to determine species presence, potential and habitat suitability (Tables 1 and 2).

Results of Swaim Biological, Inc's BRA, and CNPS, CNDDDB, IPaC, and NMFS database queries, indicate 36 special-status plant species and 45 special-status animal species have potential to occur within five miles of the BSA.

Table 1: Listed Plant Species Potential to Occur in the Project Area

Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	1B.2	Mar-Jun	Cismontane woodland, valley and foothill grassland, and coastal bluff scrub; damp rock and soil on outcrops and cliffs within broadleaved upland forest, lower montane coniferous forest and north coast coniferous forest; often on acidic substrates. Known elevations are between 325-3,280 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. Only one record within 5 miles of the BSA, at Briones Regional Park.
<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace	4.2	Mar-Jun	Prefers dry grassy slopes within chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Known elevations are between 490-4,280 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No occurrences are reported north of the City of Concord.
<i>Arctostaphylos pallida</i>	pallid manzanita	FT/SE 1B.1	Dec-Mar	Siliceous shale, sandy or gravelly soils in broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub within the Diablo Range at known elevations between 605-1,525 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No manzanita shrubs were observed in the BSA during reconnaissance surveys.
<i>Atriplex coronata</i> var. <i>coronata</i>	crownscale	4.2	Mar-Oct	Alkaline, often clay soils in chenopod scrub, valley and foothill grassland, and vernal pools. Known elevations are between 5-1,935 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No occurrences are reported west of Mt. Diablo.

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Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Blepharizonia plumosa</i>	big tarplant	1B.1	Jul-Oct	Valley and foothill grassland, usually clay soils. Known elevations are between 100-1,655 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. The only observation within 5 miles of the BSA dates from a 1917 museum record and is vaguely located as "Benicia".
<i>Calochortus pulchellus</i>	Mt. Diablo fairy-lantern	1B.2	Apr-Jun	Occurs on north-facing wooded slopes in riparian woodland, and valley and foothill grassland, rarely within chaparral, at elevations between 100-2,755 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. North facing woodlands are predominantly eucalyptus groves within the area.
<i>Calochortus umbellatus</i>	Oakland star-tulip	4.2	Mar-May	Often serpentine soils in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland at elevations of 328-2,297 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip	4.2	Mar-Aug	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, and vernal pools margins. Known elevations are between 0-1,425 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	1B.1	May-Oct(Nov)	Often alkaline soils in chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, and vernal mesic valley and foothill grassland, at elevations of 3-750 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. Four records occurs within 5 miles of the BSA, the nearest of which is located 2.4 miles east at the Waterbird

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Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
						Regional Preserve.
<i>Chloropyron molle</i> ssp. <i>molle</i>	soft bird's-beak	FE/SR 1B.2	Jun-Nov	Marshes and swamps (coastal salt). Known elevations are between 0-10 feet.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water-hemlock	2B.1	Jul-Sep	Marshes and swamps coastal, fresh or brackish water. Known elevations are between 0-655 feet.	HP	Low Potential. Potentially suitable habitat is present in the BSA. The only records of the species within 5 miles of the BSA date from 1900 and 1938, and are located in Benicia and "Near Martinez".
<i>Cirsium andrewsii</i>	Franciscan thistle	1B.2	Mar-Jul	Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub; mesic, sometimes serpentine soils. Known elevations are between 0-490 feet.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Dirca occidentalis</i>	western leatherwood	1B.2	Jan-Mar(Apr)	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland with mesic soils. Known elevations are between 80-1,395 feet.	HP	Low Potential. Potentially suitable habitat is present. All known occurrences of the species in the vicinity are associated with the areas around Cummings Skyway near Crockett, 2.9 miles west of the BSA.
<i>Eleocharis parvula</i>	small spikerush	4.3	(Apr)Jun-Aug(Sep)	Marshes and swamps. Known elevations are between 5-9,910 feet.	HP	Low Potential. Potentially suitable habitat is present. No records of the species occur within 5 miles of the BSA.

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Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Eryngium jepsonii</i>	Jepson's coyote thistle	1B.2	Apr-Aug	Occurs in wetlands below 1,640 feet elevation on moist clay soil.	HP	Low Potential. Potentially suitable habitat is present. The nearest occurrence is located in annual grasslands at the Carquinez Regional Shoreline southeast of the project site.
<i>Extriplex joaquinana</i>	San Joaquin spearscale	1B.2	Apr-Oct	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland; alkaline soils. Known elevations are between 2-2,740 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Fissidens pauperculus</i>	minute pocket moss	1B.2	-	North coast coniferous forest (damp coastal soil). Known elevations are between 35-3,360 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Fritillaria liliacea</i>	fragrant fritillary	1B.2	Feb-Apr	Often serpentinite soils in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, at elevations of 10-1,345 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Helianthella castanea</i>	Diablo helianthella	1B.2	Mar-Jun	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, Riparian woodland, valley and foothill grassland; usually rocky, axonal soils. Often in partial shade. Known elevations are between 195-4,265 feet.	HP	Low Potential. Suitable habitat is present in the BSA. Several records occur on the coastal hillsides of the Carquinez Strait Regional Shoreline Park, with the nearest located approximately 100

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Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
						feet west of the BSA.
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT/SE 1B.1	Jun-Oct	Occurs in coastal prairie, coastal scrub and valley and foothill grasslands, in areas with light sandy soil, or sandy clay between 30-720 feet.	HP	Low Potential. Grassland habitat is minimally present in the BSA. No records of the species occur within 5 miles of the BSA.
<i>Iris longipetala</i>	coast iris	4.2	Mar-May	Coastal prairie, lower montane coniferous forest, meadows and seeps; mesic soils. Known elevations are between 0-1,970 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Isocoma arguta</i>	Carquinez goldenbush	1B.1	Aug-Dec	Generally found in wetlands within valley and foothill grassland, usually within alkali flats or other mineral-rich soils of the Suisun Slough at elevations of 3-65 feet.	HP	Low Potential. Potentially suitable habitat is present within the BSA. The only CNDDDB record within 5 miles of the BSA dates from 1968, and is based on a site named in, "A California Flora and Supplement."
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE/— 1B.1	Mar-Jun	Mesic habitats including cismontane woodland, alkaline playas, valley and foothill grasslands, and vernal pools, at elevations of 0-1,542 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA.
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	1B.2	May-Jul (Aug-Sep)	Low elevation marshes and swamps (freshwater and brackish). Known elevations are between 0-15 feet.	A	Not Expected. Potentially suitable habitat is present within the BSA. Nine records of the species occur within 5 miles of the BSA, suitable habitat does not occur within the BSA.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	—/SR 1B.1	Apr-Nov	Marshes and swamps (brackish or freshwater), riparian scrub. Known elevations are between 0-35 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. The nearest known occurrence is located 1.9 miles east of the BSA, at Payton Slough.
<i>Meconella oregana</i>	Oregon meconella	1B.1	Mar-Apr	Coastal prairie and scrub at elevations between 820-2,035 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5- miles of the BSA, and the BSA is outside the elevational range of the species.
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	3.2	Mar-May	Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland; rocky soils. Known elevations are between 150-2,705 feet.	HP	Low Potential. Potentially suitable habitat is minimally present within the BSA.
<i>Monardella antonina</i> ssp. <i>antonina</i>	San Antonio Hills monardella	3	Jun-Aug	Chaparral and cismontane woodland at elevations of 1,050-3,281 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA. Elevations in the BSA are lower than at reported occurrences.
<i>Navarretia gowenii</i>	Lime Ridge navarretia	1B.1	May-Jun	Chaparral at elevations of 591-1,001 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA. Elevations in the

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
						BSA are lower than at reported occurrences.
<i>Polygonum marinense</i>	Marin knotweed	3.1	(Apr)May-Aug(Oct)	Marshes and swamps (coastal salt or brackish). Known elevations are between 0-35 feet.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	4.2	Feb-May	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools; mesic soils. Known elevations are between 50-1,540 feet.	A	Not expected. Suitable habitat does not occur within the BSA. No records of the species occur within 5 miles of the BSA
<i>Spergularia macrotheca</i> var. <i>longistyla</i>	long-styled sand-spurrey	1B.2	Feb-May(Jun)	Alkaline marshes, mud flats, meadows, and hot springs at elevations between 0-670 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. The only record occurring within 5 miles of the BSA dates from a 1900 museum collection.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	1B.2	(Mar)Apr-Sep(Oct)	Chaparral, cismontane woodland, valley and foothill grassland; serpentine soils. Known elevations are between 310-3,280 feet.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	1B.2	(Apr)May-Nov	Marshes and swamps (brackish and freshwater). Known elevations are between 0-10 feet.	HP	Low Potential. Suitable habitat is present within the BSA. The nearest records are located 3.1 miles east of the BSA at Pacheco Creek.
<i>Trifolium hydrophilum</i>	saline clover	1B.2	Apr-Jun	Salt marsh and swamp, vernal pool or other wetlands within valley and foothill grassland on alkaline soils at elevations of 0-985 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. The only record occurring within 5 miles of the BSA dates from a 1938

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Blooming Period	Habitat Requirements	Habitat Present /Absent	Potential to Occur
						museum collection and is located across the Bay near Benicia.
<i>Viburnum ellipticum</i>	oval-leaved viburnum	2B.3	May-Jun	Chaparral, cismontane woodland, and lower montane coniferous forest at elevations of 705-4,595 feet.	A	Not Expected. Suitable habitat does not occur within the BSA. The only record within 5 miles of the BSA occurs at Briones Regional Park. Elevations in the BSA are lower than at reported occurrences.

California Rare Plant Rank (CRPR) Designation: (1A) Presumed extinct in California; (1B) Rare, threatened, or endangered in California and elsewhere; (2) Rare, threatened, or endangered in California, but more common elsewhere; (3) More information is needed; (4) Limited distribution, watch list. **Threat Ranks:** 0.1 Seriously threatened in California (more than 80% of occurrences threatened / high degree and immediacy of threat); 0.2 Fairly threatened in California (20 to 80% occurrences threatened / moderate degree and immediacy of threat); 0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Table 2: Listed Animal Species Potential to Occur in the Project Area

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
Invertebrates					
<i>Bombus occidentalis</i>	western bumble bee	—/SC	Wet/moist meadows with abundant floral resources, roadside areas, and other areas containing forage species preferred by bumble bees .	A	Not Expected. Suitable habitat does not occur within the BSA. Current California populations are mostly restricted to high elevation sites in the Sierra Nevada, with only a few observations of the species on the northern California coast (Xerces Society 2008). May occur in grassland and scrub areas and forest openings. Not expected in low-diversity eucalyptus groves and annual grasslands.
<i>Branchinecta conservation</i>	conservancy fairy shrimp	FE/—	Ephemeral freshwater and playa pools in the Central Valley and the San Francisco Bay Area.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' known range.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/—	Vernal pools and ditches in the Central Valley.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' range.
<i>Callophrys mossii bayensis</i>	San Bruno elfin butterfly	FE/—	Rocky outcrops and cliffs in coastal scrub on the San Francisco Peninsula. Host plant is <i>Sedum spathulifolium</i> .	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside of species' known range.
<i>Danaus plexippus pop. 1</i>	monarch – California overwintering population	FC/—	Requires milkweed for larval host plant, and late-blooming plants for adult nectar during migration.	A	Not Expected. While potentially suitable habitat is present in eucalyptus groves, overwintering monarchs are not known to occur in the BSA. The nearest known active overwintering site occurs 8.8 miles northwest of the BSA, on Mare Island. Within Contra Costa County, only two overwintering locations are known, of which only one is known to be active (Xerces Society 2016).
<i>Speyeria callippe callippe</i>	Callippe silverspot butterfly	FE/—	Grasslands supporting its host plant, <i>Viola pedunculata</i> . Uses a variety of nectar plant species found in grassland and coastal scrub communities, with ridgelines and hilltops forming an important habitat component.	A	Not Expected. Suitable habitat does not occur within the BSA. While the species historically occurred in the grasslands of Contra Costa County, it is no longer extant in the County. Since the late 1980s, the species has only been recorded in San Mateo, Alameda, and Sonoma Counties. Further, the species' larval host plant was not observed in the BSA during reconnaissance surveys.
<i>Syncaris pacifica</i>	California freshwater shrimp	FE/SE	Low gradient streams with moderate to heavy riparian cover. Occasionally in isolated pools of minimal cover when water levels are low. Endemic to Marin, Napa and Sonoma counties.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' range.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
Fish					
<i>Archoplites interruptus</i>	Sacramento perch	–/SSC	Found mostly in alkaline lakes, reservoirs, and farm ponds. Often associated with submerged vegetation or other objects in the nearshore area of warm water lakes and ponds.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Hypomesus transpacificus</i>	Delta smelt	FT/SE	Shallow tidal waters of the Sacramento and San Joaquin River Delta.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' range.
<i>Oncorhynchus mykiss irideus</i> pop. 8	steelhead salmon – central California coast DPS	FT/–	Spawn in coastal watersheds ranging from the Russian River in Sonoma County to Aptos Creek in Santa Cruz County.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' range.
<i>Oncorhynchus tshawytscha</i> pop. 7	chinook salmon – Sacramento River winter-run ESU	FE/–	Spawn in coastal watersheds ranging from Redwood Creek in Humboldt County to the Russian River in Sonoma County.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the species' range.
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	–/SSC	Confined to the Delta, Suisun Bay and associated marshes, slow moving rivers sections, and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young.	A	Not Expected. Suitable habitat does not occur within the BSA.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Spirinchus thaleichthys</i>	longfin smelt	FC/ST	Spawns in fresh water in the upper end of the San Francisco Bay; occurs year-round in the Suisun Bay.	A	Not Expected. Suitable habitat does not occur within the BSA.
Amphibians					
<i>Ambystoma californiense</i> – Central California DPS	California tiger salamander	FT/ST	Breeds in vernal pools and seasonal wetlands; uses small mammal burrows in suitable uplands during the dry season.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside of the known range of the species (California Herps 2023).
<i>Rana boylei</i>	foothill yellow-legged frog – West/Central Coast Clade	–/SE	Rocky streams in open areas with riffles and cobble-sized stones in Coast Range.	A	Not Expected. Suitable habitat does not occur within the BSA. Streams in this area lack the riffles and cobble-sized stones preferred by the species.
<i>Rana draytonii</i>	California red-legged frog	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development and must have access to upland habitat.	HP	Low Potential. Aquatic habitat in the BSA provides marginal or low-quality breeding habitat as they are shallow, narrow, sparsely vegetated, and typically dry by July. The closest occurrence (Occurrence No. 508) is located 2.2 miles northwest of the BSA which is near the maximum distance that frogs can disperse from breeding sites during a single season (USFWS 2010).
Reptiles					
<i>Anniella pulchra</i>	Northern California legless lizard	–/SSC	Sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Requires loose soils that are warm and moist.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Emys marmorata</i>	western pond turtle	–/SSC	Permanent and intermittent freshwater aquatic habitats including rivers, streams,	A	Not Expected. Suitable habitat does not occur within the BSA. Wetlands in the BSA are not connected to suitable stream or pool habitat.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
			lakes, ponds, marshes, and vernal pools. Prefers habitats with abundant basking sites, underwater refugia, and standing or slow moving water. Nesting sites are on sandy banks and bars or in fields or sunny spots up to a few hundred meters from water.		
<i>Masticophis lateralis euryxanthus</i>	Alameda whipsnake (= striped racer)	FT/ST	Chaparral, northern coastal sage scrub, coastal sage, and grassland communities.	A	Not Expected. Suitable habitat does not occur within the BSA. Scrub habitat in and adjacent to the BSA is limited in extent, highly fragmented, and surrounded by oak and eucalyptus woodland. All observations of the species in the vicinity of the BSA occur south of State Route 4, with the nearest located approximately 2.4 miles south of the BSA (Occurrence No. 74).
<i>Thamnophis gigas</i>	giant garter snake	FT/ST	Associated with aquatic habitats. Often occurs in or near agricultural wetlands and other waterways such as irrigation and drainage canals; sloughs; ponds; small lakes; low gradient streams; rice fields; freshwater marshes; and adjacent uplands in the Sacramento and Central Valleys.	A	Not Expected. Suitable habitat does not occur within the BSA.
Birds					
<i>Agelaius tricolor</i>	tricolored blackbird	-/ST	Nests colonially in extensive emergent vegetation and agricultural fields.	A	Not Expected. Suitable habitat does not occur within the BSA. Dense emergent habitat sufficient to support a nesting colony of tricolored blackbirds is

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
					absent from the BSA. Limited foraging habitat for this species occurs in the wetlands bordering the railroad tracks.
<i>Aquila chrysaetos</i>	golden eagle	—/FP	Avoiding developed areas, they are found in open areas of native vegetation, mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nest in large trees in oak savannah, and on cliffs and steep escarpments in chaparral, forest, and other vegetated areas.	A	Not Expected. Suitable habitat does not occur within the BSA.
<i>Asio flammeus</i>	short-eared owl	—/SSC	Occupies a variety of open habitats with sufficient rodent prey concentrations. Nests on dry ground in open areas with dense herbaceous cover. May occur in salt and freshwater marshes, grasslands, agricultural fields, and pastures.	A	Not Expected. Suitable habitat does not occur within the BSA. Marshes north of the BSA may provide breeding and foraging habitat, but the species is not expected to occur in the BSA except as a transient.
<i>Athene cunicularia</i>	burrowing owl	—/SSC	Open arid and semiarid grassland, agricultural, and ruderal habitats where ground squirrel or other burrows are present.	A	Not Expected. Suitable habitat does not occur within the BSA. No ground squirrel colonies or other burrows were observed during surveys.
<i>Charadrius nivosus nivosus</i>	western snowy plover	FT/SSC	Breeds above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and	A	Not Expected. Suitable habitat does not occur within the BSA.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
			estuaries. Less common nesting habitat includes bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars.		
<i>Circus hudsonius</i>	northern harrier	–/SSC	Occurs in sloughs; wet meadows; marshlands; swamps; prairies; plains; grasslands; shrublands; large forest openings; or low woody or herbaceous vegetation. Nests on the ground in dense clumps of vegetation, such as grasses or rushes.	A	Not Expected. Suitable habitat does not occur within the BSA. Individuals may occasionally forage in grasslands and marsh habitat near the BSA.
<i>Coturnicops noveboracensis</i>	yellow rail	–/SSC	Sedge marshes and meadows with moist soil or shallow standing water and densely vegetated montane sedges.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside of the known breeding range of the species. Considered an extremely rare winter visitor in the San Francisco Bay region, with single birds occasionally observed in the Suisun Marsh (Heath 2008).
<i>Elanus leucurus</i>	white-tailed kite	–/FP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	HP	Low Potential. White-tailed kites have frequently been observed in marsh habitats north of the BSA (eBird 2023); however, large, isolated trees or shrubs suitable for kite nesting are absent from the BSA, and the species has not been recorded breeding in the vicinity (Mt. Diablo Audubon Society 2009). A lack of isolated trees surrounded by open foraging habitat, combined with high levels of human disturbance associated with park trails and railroads limit nesting opportunities for the species in this area.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Falco peregrinus anatum</i>	American peregrine falcon	–/FP	Nests near water on ledges of rocky cliffs or buildings. Also found along rivers and coastlines or in cities/urban areas.	A	Not Expected. Suitable habitat does not occur within the BSA. The nearest known nesting records are located on the Carquinez Bridge and the Mare Island Bridge (Napa-Solano Audubon Society 2014). While individuals may occasionally forage in the vicinity, they are not expected to breed in or near the BSA.
<i>Geothlypis trichas sinuosa</i>	salt marsh common yellowthroat	–/SSC	Nests in herbaceous vegetation in densely vegetated brackish and freshwater marshes, moist floodplains, and woody swamps.	A	Not Expected. Suitable habitat does not occur within the BSA. The nearest known breeding records of the species are located in extensive tidal marshes 2.1 miles east of the BSA (Occurrence No. 86). High quality nesting habitat in the form of dense marsh vegetation occurs north of the BSA in the Martinez Regional Shoreline Park, and the species is frequently observed there in the breeding season (eBird 2023).
<i>Haliaeetus leucocephalus</i>	bald eagle	D/SE/FP	Breeding habitats are mainly in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers. Most breeding territories are in northern California.	A	Not Expected. Suitable habitat does not occur within the BSA. The only known nesting account in Contra Costa County is located at San Pablo Reservoir. This was the first known bald eagle nest for the County, and the species was not known to breed in the County prior to this account (Grinnell and Miller 1927, Mt. Diablo Audubon Society 2009).
<i>Icteria virens</i>	yellow-breasted chat	–/SSC	Nests in dense stands of willow and other riparian habitat.	A	Not Expected. Suitable habitat does not occur within the BSA. No breeding records of the yellow-breasted chat are known from the vicinity and the species is a very rare breeder in the County, with records occurring only in the County's far northeastern corner (Mount Diablo Audubon Society 2009). Historically, the species is only known to occur as far west as the center of the County.

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST/FP	Salt marshes of San Francisco Bay and Suisun Marsh, and some freshwater inland marshes of the Sacramento Bay-Delta.	A	Not Expected. The limited extent and sparse vegetation of the wetlands in the BSA are not suitable habitat for the species. The nearest records of black rails occur in marshes 0.6 miles northeast of the BSA (Occurrence No. 184) and rails have also been heard calling in the restored portions of the tidal marshes about 500 feet north of the BSA (Jaramillo 2015). Traveled railroad tracks and developed areas separate the BSA from suitable habitat to the north.
<i>Melospiza melodia maxillaris</i>	Suisun song sparrow	-/SSC	Permanent resident of tidal salt marshes of Suisun Bay. Forages and nests in emergent vegetation. The Suisun subspecies occurs along the shores of Suisun Bay from Martinez eastward.	A	Not Expected. Suitable habitat does not occur within the BSA. Breeding individuals have been recorded in tidal marshes north of and outside the BSA (eBird 2023).
<i>Melospiza melodia samuelis</i>	San Pablo song sparrow	-/SSC	Permanent resident of tidal salt marshes of the San Pablo Bay. Forages and nests in emergent vegetation. The San Pablo subspecies occurs in salt marshes along the shores of San Pablo Bay, including Richmond and Pinole, southeast to Point San Pablo.	A	Not Expected. Suitable habitat does not occur within the BSA. Song sparrows occurring in the BSA are assumed to be the Suisun subspecies.
<i>Rallus obsoletus obsoletus</i>	California Ridgway's rail	FE/SE/FP	Salt and brackish marshes of San Francisco Bay.	A	Not Expected. No suitable salt or brackish marsh habitat occurs in the BSA. The nearest records of Ridgway's rails occur in marshes 0.6 miles northeast of the BSA (Occurrence No. 114) and the species has been

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
					observed in the restored tidal marshes at Martinez Regional Shoreline, about 500 feet north of the BSA (Jaramillo 2015).
<i>Setophaga petechia</i>	yellow warbler	–/SSC	Nests in riparian habitat with a mature overstory of cottonwood and sycamore, a midstory of box elder and willow and a dense understory of vines, blackberries and forbs.	A	Not Expected. Suitable habitat does not occur within the BSA. The species typically nests in riparian corridors with a mature overstory and dense understory. Yellow warblers are generally absent from riparian zones that are limited, discontinuous, or lacking sufficient understory cover (Santa Clara Valley Audubon Society 2007).
<i>Sterna antillarum browni</i>	California least tern	FE/SE	Nests on barren and sparsely vegetated sandy or gravelly substrate within marine and estuarine shores and abandoned salt ponds. Nesting colonies placed in areas of low human and predatory disturbance.	A	Not Expected. Suitable habitat does not occur within the BSA. No nesting colonies have been recorded in the vicinity (CDFW 2023).
Mammals					
<i>Antrozous pallidus</i>	pallid bat	–/SSC	Regionally found in low elevation arid or semi-arid areas near water. Their day roost is often in a warm horizontal opening (e.g., rock cracks, attics); the night roost is often in the open, near foliage; and the hibernation roost is often in buildings, caves, or cracks in rocks.	HP	Low Potential. The pedestrian bridge in the BSA lacks crevices or other structures that retain heat and provides only low-quality night roost habitat for the species. Eucalyptus with exfoliating bark, cracks, and crevices provide suitable roost habitat for pallid bats. Small numbers of bats may utilize tree roost habitat in the BSA. No documented occurrences are present within 5 miles (CDFW 2023).
<i>Lasiurus blossevillii</i>	western red bat	–/SSC	Typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in	HP	Low Potential. Suitable roosting habitat occurs in the BSA where dense foliage clusters are present in woodland habitat. No documented occurrences are present within 5 miles (CDFW 2023).

Natural Environment Study (Minimal Impacts)

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
			orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).		
<i>Neotoma fuscipes annectens</i>	San Francisco dusky-footed woodrat	–/SSC	Builds large stick nests in a variety of habitats, including riparian areas, oak woodlands, and scrub.	HP	Low Potential. Suitable habitat occurs throughout the BSA in riparian oak woodland, willow riparian, and scrub habitats. Reconnaissance-level surveys did not detect any woodrat nests in the BSA; however, the presence of dense stands of poison oak and blackberry may have concealed nests. Due to the availability of moderate quality habitat throughout the BSA, and the limitations of the survey, there is a low probability that the species may occur in the BSA.
<i>Nyctinomops macrotis</i>	big free-tailed bat	–/SSC	Roosts in desert and arid grassland areas where rocky outcrops, canyons, or cliffs provide ideal roosts.	A	Not Expected. Suitable habitat does not occur within the BSA. The species' range does not include northern California. Observations in the project vicinity are considered vagrants or extralimital records. The only documented occurrence within 5 miles dates from a 1979 museum specimen whose locality was vaguely recorded as "Martinez".
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	FE/SE	Salt and brackish marshes of San Francisco Bay. Primary habitat dominated by pickleweed (<i>Salicornia pacifica</i>), with adjacent upland grasslands providing refugia during flooding.	A	Not Expected. Suitable habitat does not occur within the BSA. The species has been recorded throughout marshes east of I-680, and potentially suitable marsh habitat is available north of the BSA at the Martinez Regional Shoreline. The BSA lacks suitable marsh habitat and is separated from nearby marshes by heavily traveled railroad tracks. The species' dependence on cover to escape predation, combined with the heavy use of the railroad tracks

Scientific Name	Common Name	Listing Status	Habitat Requirements	Habitat Present /Absent	Potential to Occur
					prevent it from occurring in the BSA.
<i>Sorex ornatus sinuosus</i>	Suisun shrew	–/SSC	Salt and brackish marshes along the north shore of San Pablo and Suisun Bays. Prefers areas of low, dense vegetation contiguous with vegetated uplands that provide refugia during high tides.	A	Not Expected. Suitable habitat does not occur within the BSA. The BSA is outside the known distribution of the species.
<i>Taxidea taxus</i>	American badger	–/SSC	Permanent resident found throughout most of the state, except in the northern North Coast area. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	A	Not Expected. Suitable habitat does not occur within the BSA. No burrows or dens observed during surveys.

Status: Federally Endangered (FE); Federally Threatened (FT); Federal Candidate (FC); Federally Delisted (D); State Endangered (SE); State Threatened (ST); State Candidate (SC); State Fully Protected (SP); California Species of Special Concern (CSSC).

4. Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Habitats and Natural Communities of Special Concern

The BSA does not occur within any federally designated (USFWS/NMFS) or other special-status habitats (USFWS 2023c; NMFS 2023; CDFW 2023). Three sensitive natural communities (SNC) Hardstem and California Bulrush Marsh, Yerba Mansa Alkaline Wet Meadow, and Creeping Wildrye Turf are present within the BSA.

4.1.1 Discussion of Natural Community “Hardstem and California Bulrush Marsh”

CNPS describes the Hardstem and California Bulrush Marsh community as *Schoenoplectus acutus* and/or *Schoenoplectus californicus* being dominant or co-dominant in the herbaceous layer with *Apocynum cannabinum*, *Azolla filiculoides*, *Bolboschoenus maritimus*, *Calystegia sepium*, *Eichhornia crassipes*, *Euthamia occidentalis*, *Hibiscus lasiocarpus*, *Hoita macrostachya*, *Hydrocotyle ranunculoides*, *Leersia oryzoides*, *Ludwigia peploides*, *Lycopus americanus*, *Persicaria punctata*, *Phragmites australis*, *Sparganium eurycarpum*, *Triglochin* spp., *Typha angustifolia*, *Typha domingensis*, *Typha latifolia*, and *Urtica dioica*. Membership rules require that

Schoenoplectus acutus or *Schoenoplectus californicus* > 50% cover in the herbaceous layer or > 30% relative cover if codominant with *Typha* spp. It has a rarity listing of S3 which indicates it is moderately rare and threatened. The Hardstem and California Bulrush Marsh alliance occurs as an understory community beneath the arroyo willow thicket extending downstream to the open herbaceous area.

4.1.2 Discussion of Natural Community “Yerba Mansa Alkali Wet Meadow”

CNPS describes the Yerba Mansa Alkali Wet Meadow community as *Anemopsis californica*, *Helianthus nuttallii*, *Solidago confinis* and/or *Solidago spectabilis* being dominant or co-dominant in the herbaceous layer with *Ambrosia psilostachya*, *Bromus hordeaceus*, *Carex praegracilis*, *Carpobrotus edulis*, *Cirsium occidentale*, *Distichlis spicata*, *Euthamia occidentalis*, *Holocarpha virgata*, *Hordeum murinum* ssp. *leporinum*, *Juncus arcticus*, *Juncus cooperi*, *Juncus rugulosus*, *Lactuca serriola*, *Leymus triticoides*, *Lolium perenne*, *Medicago polymorpha*, *Rumex crispus*, *Schoenoplectus americanus*, *Sisyrinchium bellum*, and *Sporobolus airoides*. Membership rules require 30% cover in the herbaceous layer. It has a rarity listing of S2 which indicates it is fairly rare and threatened. In the lower reaches of the low flow channel there is a ponded segment measuring approximately 100 square feet that, at the time of the aquatic resource delineation, exclusively supported the early growth of *Anemopsis californica* at approximately 30% cover. The remaining cover was algal matting, mud, or water.

4.1.3 Discussion of Natural Community “Creeping Wildrye Turf”

Only one patch of Creeping Wildrye Turf occurs in the BSA. It is located immediately along the southern end of the pedestrian bridge directly south of Nejedly Staging Area. This area is a mesic transitional zone situated between scrub habitat on the western hillside and coast live oak woodland and forest along the ephemeral creek to the south and east. Creeping Wildrye Turf in the BSA is dominated by the native wild rye species (*Leymus cinereus* and/or *Leymus triticoides*). Other native grasses and forbs also occur in the herbaceous layer, such as native brome (*Bromus* sp.), Italian ryegrass (*Festuca perennis*), rushes (*Juncus* sp.), and Douglas' sagewort (*Artemisia douglasiana*). Non-natives also occur in the herbaceous layer, including wild oat (*Avena fatua*), poison hemlock (*Conium maculatum*), and teasel (*Dipsacus* sp.). Poison hemlock and teasel are both ranked as moderately invasive (Cal-IPC 2023). Relatively low cover of coyote brush (*Baccharis pilularis*) was also present in this habitat in the BSA.

4.1.3.1 Survey Results

Three SNCs were found to be present within the BSA and would be permanently impacted by project activities. These communities consist of Hardstem and California Bulrush Marsh, Yerba Mansa Alkaline Wet Meadow, and Creeping Wildrye Turf.

4.1.3.2 Project Impacts

Three SNCs are present in the BSA and will be directly and permanently impacted during staging and construction by blading, grading, and trail establishment activities. While certain types of special-status plant individuals and vegetation communities are difficult to successfully relocate and reestablish, these three SNCs are likely to survive transplantation and successfully colonize their new areas. These areas are relatively small, especially the Yerba Mansa Alkali Wet Meadow which is approximately 100 square feet (0.002 acres). The Hardstem and California Bulrush Marsh community is approximately 300 square feet (0.007 acres). The Creeping Wildrye Turf community is approximately 2,000 square feet (0.05 acres).

4.1.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation

By requiring relocation of these communities, the following avoidance and minimization measures (AMMs) will reduce potentially significant impacts:

AMM BIO-1. Sensitive Natural Communities Avoidance. In advance of construction mobilization, the project proponent will flag portions of the project that are containing SNCs for avoidance.

AMM BIO-2. Sensitive Natural Communities Relocation/Replanting. If avoidance of SNCs is not possible, plants that are characteristic of the SNCs that would be affected by project activities will be relocated before or in timely conjunction with construction activities. It may be feasible to relocate plants from each of the SNCs to areas along the trail margins where they already occur. The scalped/excavated SNCs will be replanted promptly to ensure they survive and do not die from exposure and desiccation, with the location and timing of transplantation to be determined in consultation with CDFW.

4.2 Special-Status Plant Species

Plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by special-status plants occurring on site. While no special-status plants were detected during site surveys, potentially suitable habitat for the following species known from the region was determined to be present within the BSA: Bolander's water-hemlock (*Cicuta maculata* var. *bolanderi*), western leatherwood (*Dirca occidentalis*), small spikerush (*Eleocharis parvula*), Jepson's coyote thistle (*Eryngium jepsonii*), Mt. Diablo helianthella (*Helianthella castanea*), Santa Cruz tarplant (*Holocarpha macradenia*), Carquinez goldenbush (*Isocoma arguta*), Mt. Diablo cottonweed (*Micropus amphibolus*), and Suisun marsh aster (*Symphyotrichum lentum*).

4.2.1 Discussion of Plant Species "Bolander's water-hemlock"

Bolander's water-hemlock is a perennial forb that has a CRPR rating of 2B.1. It has a blooming period between June and November. It occurs in marsh or swamp habitats

with fresh or brackish water, which occur surrounding the BSA. Occurrences are known from collections within Benicia from 1938 (CNDDDB Occurrence No. 3).

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.2 Discussion of Plant Species “western leatherwood”

Western leatherwood is a deciduous shrub that has a CRPR rating of 1B.2. It has a blooming period between January and March. It occurs in chaparral and riparian forest habitats which occur sparsely within the BSA. Occurrences are known around Cummings Skyway near Crocket, approximately 2.9 miles west of the BSA (CNDDDB Occurrence No. 77).

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.3 Discussion of Plant Species “small spikerush”

Small spikerush is a perennial herb that has a CRPR rating of 4.3. It has a blooming period between June and August. It occurs in marsh habitats similar to those which occur within and surrounding the BSA. No known occurrences are found within five miles of the BSA.

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.4 Discussion of Plant Species “Jepson's coyote thistle”

Jepson's coyote thistle is a perennial herb that has a CRPR rating of 1B.2. It has a blooming period between April and August. It occurs in wetland habitats similar to those which occur within the BSA. Occurrences are known from grasslands within the Carquinez Strait Regional Shoreline southeast of the BSA (CNDDDB Occurrence No. 10).

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.5 Discussion of Plant Species “Mt. Diablo helianthella”

Mt. Diablo helianthella is a perennial herb that has a CRPR rating of 1B.2. It has a blooming period between March and June. It occurs in a variety of vegetation communities, including riparian woodland and valley and foothill grassland communities similar to those which occur within the BSA, and prefers a microhabitat of rocky axonal

soils (young soils formed in recent floodplains, without well-developed subsoils) often in partial shade. Occurrences in Marin and San Francisco counties are believed to be extirpated, leaving extant populations only in Alameda, Contra Costa, and San Mateo counties. An extant occurrence (CNDDDB Occurrence No. 56) is located just west from the Nejedly Staging Area in a coastal scrub and oak woodland habitat system, approximately 100 feet from the BSA.

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.6 Discussion of Plant Species “Santa Cruz tarplant”

Santa Cruz tarplant is an annual wildflower that has a CRPR rating of 1B.1 and a listing status of federally threatened and state endangered. It has a blooming period between June and October. It occurs within coastal scrub and foothill grassland habitats which both occur sparsely within the BSA. No historic occurrences have been recorded within five miles of the BSA.

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.7 Discussion of Plant Species “Carquinez goldenbush”

Carquinez goldenbush is a perennial shrub that has a CRPR rating of 1B.1. It has a blooming period between August and December. It occurs in wetlands found within foothill grassland habitats similar to those which occur within the BSA. One known occurrence from 1968 was observed at the Carquinez Strait Regional Shoreline southeast of the BSA (CNDDDB Occurrence No. 10).

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.8 Discussion of Plant Species “Mt. Diablo cottonweed”

Mt. Diablo cottonweed is an annual herb that has a CRPR rating of 3.2. It has a blooming period between March and May. It occurs in chaparral and foothill grassland habitats which occur sparsely within the BSA. No historic occurrences have been documented within five miles of the BSA.

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.9 Discussion of Plant Species “Suisun Marsh aster”

Suisun marsh aster is a perennial herb that has a CRPR rating of 1B.2. It has a blooming period between April and November. It occurs in marsh habitats similar to those which occur within the BSA. Occurrences are known from Pacheco Creek approximately 3.1 miles east of the BSA (CNDDDB Occurrence No. 17).

The species was not observed during reconnaissance surveys. However, special-status plant surveys will be performed during the known blooming period of this species and its presence documented if found within the BSA.

4.2.9.1 Survey Results

According to CNDDDB and CNPS database queries, 36 special-status plant species are known from the vicinity of the BSA, and as described above, suitable habitat occurs within the BSA for nine (9) of these species. No special-status plants were observed during reconnaissance-level surveys.

4.2.9.2 Project Impacts

While no special-status plants were observed during reconnaissance surveys, these surveys were conducted outside blooming periods for special-status species that have potential for occurrence within the BSA due to the presence of suitable habitat on site. Therefore, appropriately-timed special-status plant surveys will be performed prior to project commencement to determine presence/absence of listed plants within the BSA.

4.2.9.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Special-status plant surveys will be conducted following CDFW's 2018 *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities* and will document presence if detected in the BSA. No special-status plants were observed during reconnaissance surveys in 2020 and 2023. If special-status plants are present in the BSA they could be directly and permanently impacted during staging and construction by blading, grading, and trail establishment activities. If present and not impacted directly by the construction phase, they could also be impacted during pre-construction mobilization of equipment and staging. Accordingly, special-status plant surveys are critical to prevent these types of impacts by identifying their presence/absence within the BSA. If special-status plants are identified within the BSA, the following AMMs would reduce potentially significant impacts to less than significant:

AMM BIO-3. Special-Status Plant Avoidance. Special-status plant individuals and/or populations would be flagged and avoided during project-related activities. To prevent accidental impacts, special-status plant areas would be clearly marked with high visibility flagging or fencing prior to the start of construction activities, and the flagging

or fencing would be maintained around the special-status plant areas for the duration of construction.

AMM BIO-4. Coordination with Agencies. If avoidance is not feasible, appropriate agencies will be contacted to identify appropriate relocation and compensation strategies. These agencies are typically CDFW and CNPS, but may also include USFWS, RWQCB, and BCDC based on special-status plant legal status and whether the growing location overlaps with aquatic resource jurisdiction. Projects requiring more than minimal compensatory mitigation would require a full Natural Environment Study and shall not use this format.

4.3 Special-Status Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. While no special-status animal species were observed within the BSA, suitable habitat is present for the following species: California red-legged frog (*Rana draytonii*), white-tailed kite (*Elanus leucurus*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*).

4.3.1 Discussion of Animal Species “California red-legged frog”

The California red-legged frog is federally listed as threatened and is also considered a Species of Special Concern by the CDFW (USFWS 1996; CNDDB 2023). Critical habitat was designated for the species in 2010 (USFWS 2010).

The California red-legged frog is the largest native frog in the western United States (Wright and Wright 1949) and can range from 1.75 to 5.25 inches in length (Stebbins 2003). Its back is typically brown, gray, olive, or reddish brown with prominent dorsolateral folds and many small black flecks around whitish centers (Stebbins 2003). Larvae are dark brown and yellow with darker spotting and range from 0.6 to 3.1 inches in length (Storer 1925). Historically, the range of the California red-legged frog extended from along the California coast near Elk Creek in Mendocino County and inland from around Redding in Shasta County, south to Baja California (Jennings and Hayes 1985; Hayes and Krempels 1986). Although California red-legged frogs are still locally abundant in portions of the Central Coast and San Francisco Bay Area, their current range has been reduced by an estimated 70 percent from its former extent within California (USFWS 2002).

The California red-legged frog uses a variety of habitat types, including aquatic, riparian and upland areas. It predominantly inhabits permanent and semi-permanent water bodies including ponds, streams, and wetlands, but also occurs in seasonal creeks and drainages. Breeding habitat consists of wetlands, ponds, and other still or slow-moving aquatic habitat including as backwaters of streams and creeks. Other aquatic habitats including pools in intermittent creeks, seeps, and springs may provide shelter, predator avoidance, foraging opportunities, and aquatic dispersal habitat. During summer

months California red-legged frogs may take refuge in cool, moist areas including pools in stream channels, exposed roots, dense vegetation, rodent burrows, and soil crevices near breeding sites during times when water is not available. Upland and dispersal habitat can include grassland, forest, riparian areas, and agricultural fields (USFWS 2010).

The BSA is located outside of designated critical habitat for the California red-legged frog (USFWS 2010). Seven records of red-legged frogs occur within five miles of the BSA. The nearest recorded observation of the California red-legged frog was an unknown number of individuals observed in 2000 at a pond adjacent to the former Port Costa Brick Company, 2.2 miles northwest of the BSA (CNDDDB Occurrence No. 508). The second observation was of six frogs observed in 1998 in Telephone Creek, immediately north of State Route 4, 4.4 miles southwest of the BSA (CNDDDB Occurrence No 310). This location is connected, via an underpass of State Route 4, to Rodeo Creek, where breeding red-legged frogs were documented in the early 2000s (CDFW 2020).

The wetlands located in the BSA near the railroad tracks provide marginal or extremely low-quality breeding habitat for California red-legged frog. California red-legged frog breeding sites are normally associated with relatively deep (greater than 2 feet) fresh water with shrubby or emergent riparian vegetation (Hayes and Jennings 1988), and hold water for a minimum of 20 weeks in all but the driest of years (USFWS 2010). Larvae typically metamorphose between July and September (USFWS 2002). The wetlands in the BSA typically dry by July (Bobzien 2003); during the May 2020 field survey they contained water less than two feet deep and during the December 2023 field survey they contained water less than six inches deep. Emergent vegetation within the wetlands and edge cover were sparse during the field survey. The relatively narrow width of the wetlands (less than six feet across in most areas) and their proximity to developments which promote the presence of urban adapted predators, such as striped skunk (*Mephitis mephitis*), possum (*Didelphis virginiana*), and raccoon (*Procyon lotor*) would make any California red-legged frogs or their eggs highly susceptible to predation. Areas containing deep water or dense aquatic vegetation that would allow frogs to escape from predators were absent. The ephemeral creek within the BSA is dry most of the year, and characteristics associated with red-legged frog presence, including dense vegetation, undercut banks, and exposed roots, were absent from the creek.

A small number of ponds that may be suitable to support breeding occur within about one mile of the BSA, which is reflective of the average dispersal distance for the species, although frogs are capable of moving distances of up to two miles (Bulger, et al 2003, USFWS 2010). Historic aerial imagery indicates that some of these ponds maintain sufficient hydroperiods to support breeding red-legged frogs, although most do so only in particularly wet years (Google Earth 2023). All ponds within potential dispersal distance are located to the south and west of the BSA, within open space areas which are contiguous with the BSA. No suitable habitat for California red-legged frogs occurs north or east of the BSA, due to the presence of tidal salt marsh and dense urban development.

Due to the marginal nature of the habitat on site and the distance to known occurrences, the California red-legged frog has a low potential to occur in the BSA. They are most likely to occur in the BSA during rain events and periods of wet weather when frogs tend to make overland movements away from breeding ponds and aquatic non-breeding habitats. If present, frogs would be most likely to use the wetlands, drainage ditches, and nearby leaf litter and dense vegetation. During the summer months, California red-legged frogs are less likely to occur in the BSA.

4.3.2 Discussion of Animal Species “white-tailed kite”

The white-tailed kite is a California Fully Protected species (CNDDDB 2023). The species is also protected under CFGC, the MBTA, and as a "bird of prey" under the Raptor Recovery Act.

The white-tailed kite occurs in nearly all lowlands in California, except the southeast deserts. The core of the white-tailed kite's breeding range in the U.S. is California, with nearly all areas up to the western Sierra Nevada foothills and southeast deserts occupied (Dunk 1995). They require relatively open habitat for foraging, and trees (isolated or within stands) for nesting and roosting. White-tailed kite nests are built in trees or shrubs and are composed of small twigs lined with grass, hay or leaves (Dunk 1995). White-tailed kites breed in lowland grasslands, agriculture, wetlands, oak-woodland and savannah habitats, and riparian areas associated with open areas. The presence of prey species, particularly voles, may be the most important determinant of habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997).

White-tailed kites have frequently been observed in marsh habitats north of the BSA (eBird 2023). The species has not been recorded breeding in the vicinity, although the reasons why are not clear (Mt. Diablo Audubon Society 2009). A lack of isolated trees surrounded by open foraging habitat, combined with high levels of human disturbance associated with park trails and UPRR tracks, may limit nesting opportunities for the species in this area. Therefore, white-tailed kites are not expected to nest in the BSA and have a low likelihood to occur as a transient or forager.

4.3.3 Discussion of Animal Species “pallid bat”

The pallid bat is considered a Species of Special Concern by CDFW (CNDDDB 2023). It has no federal status. Pallid bats are listed as a species of medium to high level of concern and in need of conservation action by the Western Bat Working Group.

Pallid bats occur in a variety of habitats in California, including low desert, oak woodland, and coastal redwood forests. In northern California, the species is typically associated with oak savannah habitat (Pierson and Rainey 1998). Pallid bat day-roosting habitat typically includes rocky outcrops, cliffs, large-diameter live and snag trees, and spacious crevices with access to open habitats for foraging. Pallid bats may also roost in caves, mines, bridges, barns, porches, bat boxes, stone piles, rags, baseboards, rocks, and on the ground. Day roosts are generally warm and out of reach

from ground predators. Day roosts may consist of single- or mixed-sex colonies in crevices or man-made structures. Numbers of individuals in a day roost range from a few individuals to over a hundred (Barbour and Davis 1969). Breeding colonies are formed in the spring. Young are dependent on their mothers for at least six weeks and do not gain full independence until the fall, when colonies disperse (Pierson and Rainey 1998). Pallid bats are sensitive to disturbance at roost sites and may abandon a roost if repeatedly disturbed (Pierson and Rainey 1998).

Pallid bats have been documented using bridge structures for roosting and the pedestrian bridge structure in the BSA may provide low quality night roost habitat for a small number of bats. In addition, pallid bats may roost in the loose bark, leaves, and crevices of mature eucalyptus and oaks in the BSA. No cavities capable of supporting a large colony were observed in the BSA during reconnaissance surveys and no records of the species occur within five miles of the BSA (CDFW 2023). In general, pallid bats have a low likelihood to occur in relatively small numbers within suitable tree roost habitat observed within the BSA.

4.3.4 Discussion of Animal Species “western red bat”

The western red bat is considered a Species of Special Concern by CDFW (CNDDDB 2023). It has no state or federal status. Western red bats can be found throughout California’s lower elevations, with many records concentrated in the Central Valley. Like some bats found in California, western red bats make regional movements between their winter and maternity roosts seasonally. As a foliage roosting bat, the western red bat is closely associated with well-developed riparian habitats but will also utilize other habitats (e.g., orchard trees, eucalyptus, tamarisk, etc.) that provide suitable dense clusters of leaves creating suitable roosting sites. Of note, this species has been observed roosting on the ground within leaf clutter. The western red bat is a solitary roosting bat that will often have two pups per year.

Dense foliage clusters observed in eucalyptus groves in the BSA provide potentially suitable western red bat roost habitat, though there are no western red bat records within five miles of the BSA. Western red bat roosts are small and consist of just one to a few individuals. Given the limited extent of the BSA, it is therefore unlikely to support many individuals of this solitary roosting bat. Based on the presence of potentially suitable roost habitat within and adjacent to the BSA, western red bats have a low likelihood to occur.

4.3.5 Discussion of Animal Species “San-Francisco dusky-footed woodrat”

The San Francisco dusky-footed woodrat is one of 11 woodrat subspecies and is state protected as a California Species of Special Concern (CNDDDB 2023). It has no state or federal status. It can be found throughout the San Francisco Bay Area within mixed coniferous forests and oak and riparian woodlands. It can be abundant in areas with dense shrub cover and is strongly associated with structurally complex habitats, such as riparian corridors. Woodrats are usually conspicuous where they occur due to their

large stick-pile houses which they construct on the ground, in rocky outcrops, and in trees from sticks and other debris. Houses may be reused by successive generations and some can grow to be six feet or more in height, while others are well-hidden and easily overlooked. Houses are used for rearing young, protection from predators, resting, food storage, thermal protection, and social interaction (Vestal 1938). Each house is typically inhabited by one male or one female with young (Carraway and Verts 1991) but individuals may use multiple satellite houses within a home range. Dusky-footed woodrat houses are also used by a wide variety of native amphibians, small mammals, reptiles, and insects. Dusky-footed woodrats are mostly nocturnal. They forage in trees and on the ground for a wide variety of nuts, fruits, fungi, foliage, and some forbs (Linsdale and Tevis 1951). Reproduction typically occurs between September and December and between February and July, peaking in April and May.

No woodrat middens were observed during focused surveys conducted on December 14, 2023. However, due to the availability of moderate quality habitat throughout the BSA and presence of dense stands of poison oak (*Toxicodendron diversilobum*) and blackberry (*Rubus armeniacus*), there is a low probability that the species may occur in the BSA.

4.3.5.1 Survey Results

No special-status animals were detected during the reconnaissance surveys. Low potential for species to occur was expected due to habitat suitability and historical occurrences. However, a majority of the known occurrences were found in specialized marsh habitat occurring across the railroad tracks at Martinez Regional Shoreline.

4.3.5.2 Project Impacts

According to the CNDDDB, 45 special-status animal species occurred within five miles of the BSA. A majority of these species' habitat requirements include marsh habitat and aquatic features predominately found surround the BSA. These habitat types are found in small, fragmented areas within the BSA and are subject to frequent disturbance through the active railways alongside the BSA. The following AMMs are proposed to mitigate any potential impacts to special-status animals.

4.3.5.3 Avoidance and Minimization Efforts/Compensatory Mitigation

The following AMMs are recommended to reduce the potential impacts on special-status animals:

AMM BIO-5. Worker Environmental Awareness Program. Before any ground-disturbing activities begin, a Qualified Biologist, defined as a person who possesses, at a minimum, a bachelor's degree in biological sciences, zoology, botany, ecology, or another closely-related field, and who is familiar with the special-status species that could occur in the project area, will conduct a training session for all on-site project personnel. At a minimum, the training will include a description of the California red-

legged frog, white-tailed kite, pallid bat, western red bat, and San Francisco dusky-footed woodrat, the importance of these species, the measures that are being implemented to avoid and minimize impacts as they relate to the Project, and the boundaries within which work may occur.

AMM BIO-6. Delineation of Work Area. The boundaries of the work area where natural vegetation occurs shall be clearly staked or otherwise delineated on the plans to prevent workers or equipment from inadvertently straying from the work area. All construction personnel, equipment, and vehicle movement shall be confined to designated construction and staging areas.

AMM BIO-7. Prevention of Entrapment. All excavated, steep-walled holes or trenches will be covered at the end of each workday with plywood or similar materials. If this is not possible, one or more escape ramps constructed of earth fill or wooden planks will be established in the hole. Before such holes or trenches are filled, they will be thoroughly inspected for any animals.

AMM BIO-8. No Monofilament Plastic. Plastic monofilament netting (erosion control matting) or similar material will not be used because wildlife may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackifier hydroseeding compounds.

AMM BIO-9. Biological Monitoring. A Qualified Biologist will remain on site during clearing and grubbing, tree removal, initial grading, and any vegetation removal in wetland or riparian habitat. Prior to commencement of the above construction activities, the Qualified Biologist will survey the project footprint to ensure no special-status species are within the work area. If any special-status species are found in areas where they could be impacted by work activities, work activities will be halted until the animal leaves the work area on its own.

AMM BIO-10. Seasonal Avoidance. To the extent feasible, initial grading, tree removal, and vegetation removal within riparian or wetland habitats should be restricted to the dry season (i.e., April 15 through October 15). No vegetation removal or ground disturbing activities should occur in riparian or wetland habitats during or within 24 hours following a rainfall event of 0.1 inches or more.

AMM BIO-11. Pre-Activity Survey. The Qualified Biologist will survey the work area immediately prior to vegetation removal in wetland or riparian habitats, and prior to all initial ground disturbance and tree removal activities. If California red-legged frogs are found, work will not proceed until the animal has moved out of the work area on its own.

AMM BIO-12. Seasonal Bat Avoidance. The removal of any trees containing suitable bat roosting habitat should be scheduled to avoid the maternity roost season. To the extent feasible, activities should be restricted to the period between August 31 and April 15.

AMM BIO-13. Bat Roost Deterrent/Exclusion Plan. If seasonal avoidance is not possible and roosting bats or signs of roosting bats are observed, a Qualified Biologist should develop a roost deterrent and/or roost exclusion plan. The deterrent/exclusion plan should include measures to avoid bats potentially using bat tree roost habitat within the BSA, if necessary.

AMM BIO-14. Bat Roost Habitat Survey. Prior to the start of work, the pedestrian bridge and all vegetation scheduled for removal should be surveyed to determine if potential bat roost habitat is present and if 2- phase tree removal or other avoidance measures are necessary to avoid impacts on bats.

AMM BIO-15. Pre-Construction Surveys. Prior to the start of work, the pedestrian bridge, trees, leaf clusters, or similar structures in the BSA should be thoroughly inspected by a Qualified Biologist for the presence of wildlife, including roosting bats, prior to being removed. Any bat observed in the BSA should be allowed to leave on its own.

AMM BIO-16. Biological Monitoring During Vegetation removal. A Biological Monitor should be present during tree removal and any clearing of riparian vegetation. The on-site biologist should inspect all bat roost habitat (e.g., crevice and foliage habitat types) for roosting bats prior to trimming or removal activities.

AMM BIO-17. Woodrat House Survey. Prior to the start of project activities, a survey of the BSA will be conducted for woodrat houses.

AMM BIO-18. Woodrat and House Relocation Plan. If woodrat houses are found and cannot be avoided, a San Francisco dusky-footed woodrat relocation plan will be prepared and submitted to CDFW before any woodrat houses are disturbed. The Plan would establish buffers and avoidance measures and establish a relocation protocol for woodrat houses.

AMM BIO-19. Seasonal Avoidance. Project activities should be scheduled to avoid the nesting bird season. For project planning purposes, the nesting bird season in the San Francisco Bay Area for birds protected under the MBTA is often identified by regulatory agencies as February 1 through August 31. Plan to conduct activities between September 1 – January 31 and do not initiate activities at any time if nesting birds are present (hummingbirds and raptors, for example, may nest earlier if weather conditions are mild, and could be present outside of the guidance period).

If seasonal avoidance is not possible, the following measures would minimize potential impacts on nesting birds.

AMM BIO-20. Pre-Construction Nesting Bird Surveys. Within 10-days prior to the start of work at each Segment, a Qualified Biologist should conduct a visual survey of the area for nesting birds within the work areas to be disturbed and including a perimeter buffer of 100 feet for non-raptor migratory birds and 300 feet for raptors. All nest avoidance requirements of the Migratory Bird Treaty Act should be observed (e.g.,

establishing appropriate protection buffers around active nests until young have fledged). A Qualified Biologist should resurvey the BSA if a halt in project activities of 10 days or more occurs. All nests identified during pre-construction surveys should be determined “inactive” by a Qualified Biologist prior to removal. No eagle nests should be removed without approval from USFWS.

AMM BIO-21. No Project Activities within Nest Buffers. If seasonal avoidance is not possible and nesting birds are present, a Qualified Biologist will establish temporary buffers around the nest. Project activities will not occur within the buffer areas until the nest has fledged or has otherwise become inactive.

AMM BIO-22. Biological Monitoring for Compliance and Nest Buffer Avoidance. A Qualified Biologist should monitor all identified nesting birds within the survey area for long enough to determine whether project activities will result in observable signs of disturbance to the nest. Nest buffers may need to be adjusted to a greater distance if disturbance is. Conversely, buffer size may be decreased in consultation with CDFW if project activities do not result in disturbance.

5. Conclusions and Regulatory Determinations

5.1 Federal Endangered Species Act Consultation Summary

A total of 22 federally listed species were analyzed for effects determinations for the Project following a desktop review of the USFWS, NMFS, and IPaC species lists. Appropriately-timed surveys and/ or mitigation measures will be enacted to avoid impacts to species protected under FESA.

5.2 California Endangered Species Act Summary

A total of 16 state listed species were analyzed for effects determinations for the Project following a desktop review of the CNDDDB and CNPS species lists. Appropriately-timed surveys and/ or mitigation measures will be enacted to avoid impacts to species protected under CESA.

5.3 Essential Fish Habitat Consultation Summary

Since there are no perennial surface water features within the BSA the Project will not affect EFH.

5.4 Wetlands and Other Waters Coordination Summary

Acquisition of regulatory agency authorizations pursuant to CWA Sections 401/404 and/ or CFGC Section 1600 will be required for impacts within jurisdictional wetland features occurring within the BSA.

5.5 Invasive Species

The Project has limited potential to spread invasive plant species as the area in path footprint occurs along a predominately disturbed area and is surrounded by several invasives species currently, such as French broom (*Genista monspessulana*) and Himalayan blackberry (*Rubus armeniacus*). Therefore, the Project is not expected to result in an increase of invasive plant species within and/or adjacent to project boundaries.

5.6 Other

5.6.1 Nesting Birds

Habitat that supports nesting for birds protected under the MBTA and CFGC occurs throughout the BSA. Avoidance and minimization efforts described above will be implemented to avoid impacts to nesting birds.

5.6.2 Trees

The Project will avoid damage to and/or removal of trees; therefore, it is determined that no effect to trees will occur as a result of project-related activities.

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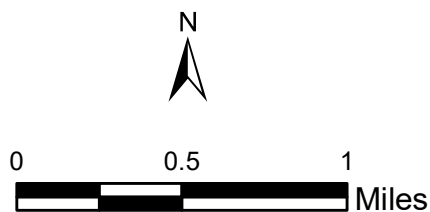
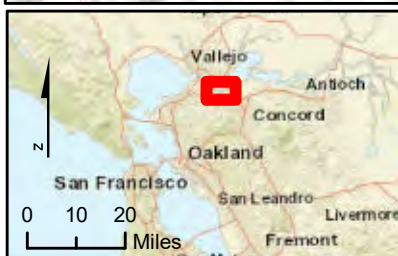
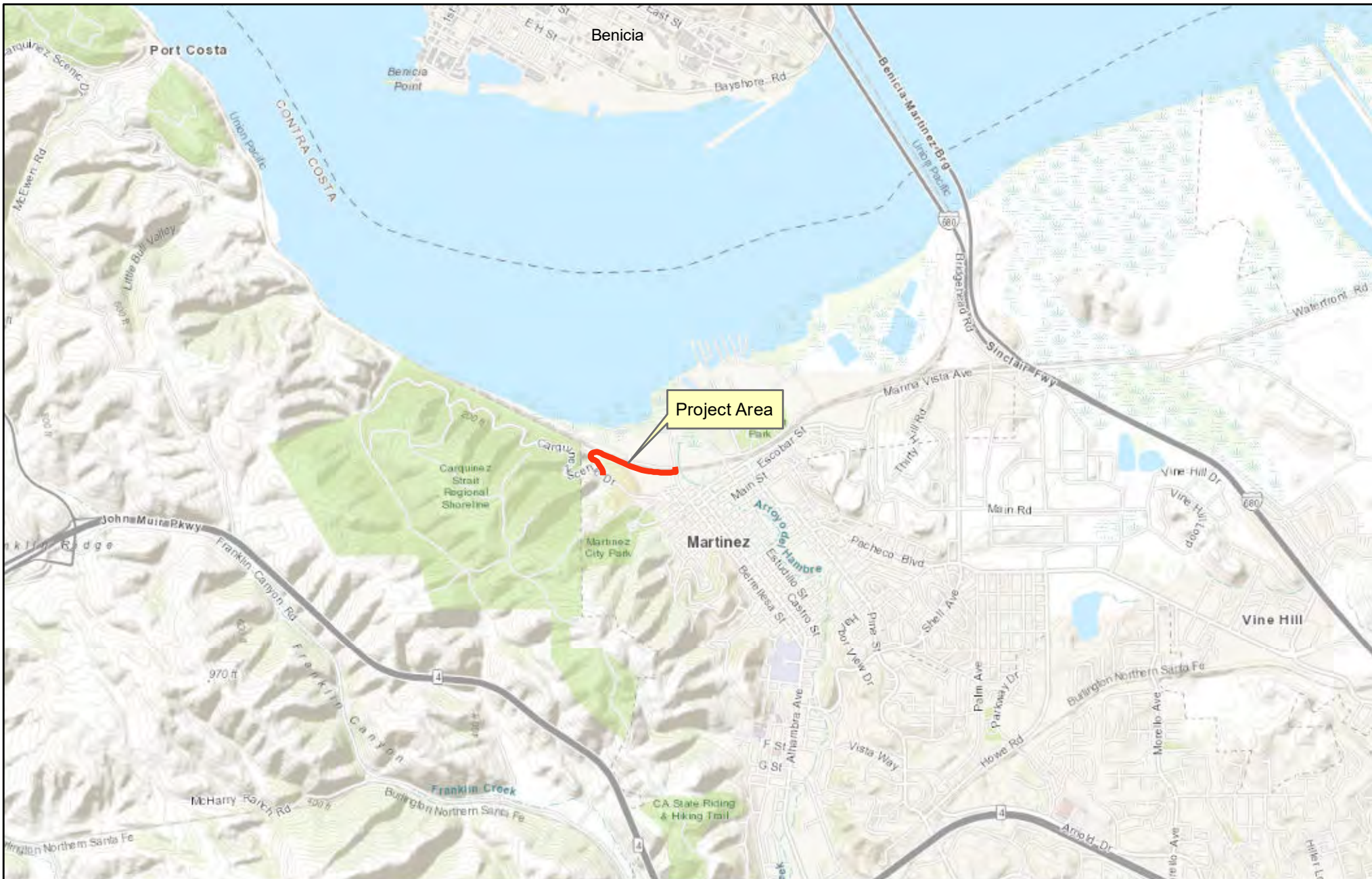
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7. Appendices

Appendix A. Figures



East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 1 - Vicinity Map
 May 2020

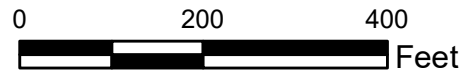


Nejedly Staging Area

- Biological Survey Area
- Pedestrian Bridge
- Martinez Bay Trail
- Segment 1
- Segment 2
- Segment 3
- Creeks/Drainages (CDD)

Habitats

- Arroyo Willow Thickets
- California Sagebrush Scrub
- Coast Live Oak Woodland and Forest
- Creeping Ryegrass Turf
- Developed
- Eucalyptus Grove
- Freshwater and Brackish Marshes
- Low Flow Channel
- Ruderal
- Wild oats and Annual Brome Grassland



East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 2 - Biotic Habitats Map
 May 2020



East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Martinez, CA
 May 2020

Figure 3 - Impacts to Wetlands and Other Waters of the U.S. for the Martinez Bay Trail Project



Legend

- Map Reference Point
- ▭ Survey Area Boundary (6.68 acres)
- ▭ Permanent Impact Area
- Creeks/Drainages (Contra Costa County)
- Unmapped Drainages
- ▬ Stand alone swale
- ▭ Low Flow Channel

Wetlands (0.74 acres)

- ▭ Wetlands (0.14 acres)
- ▭ Adjacent Wetland (0.60 acres)

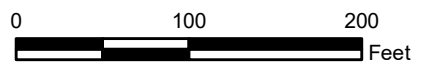
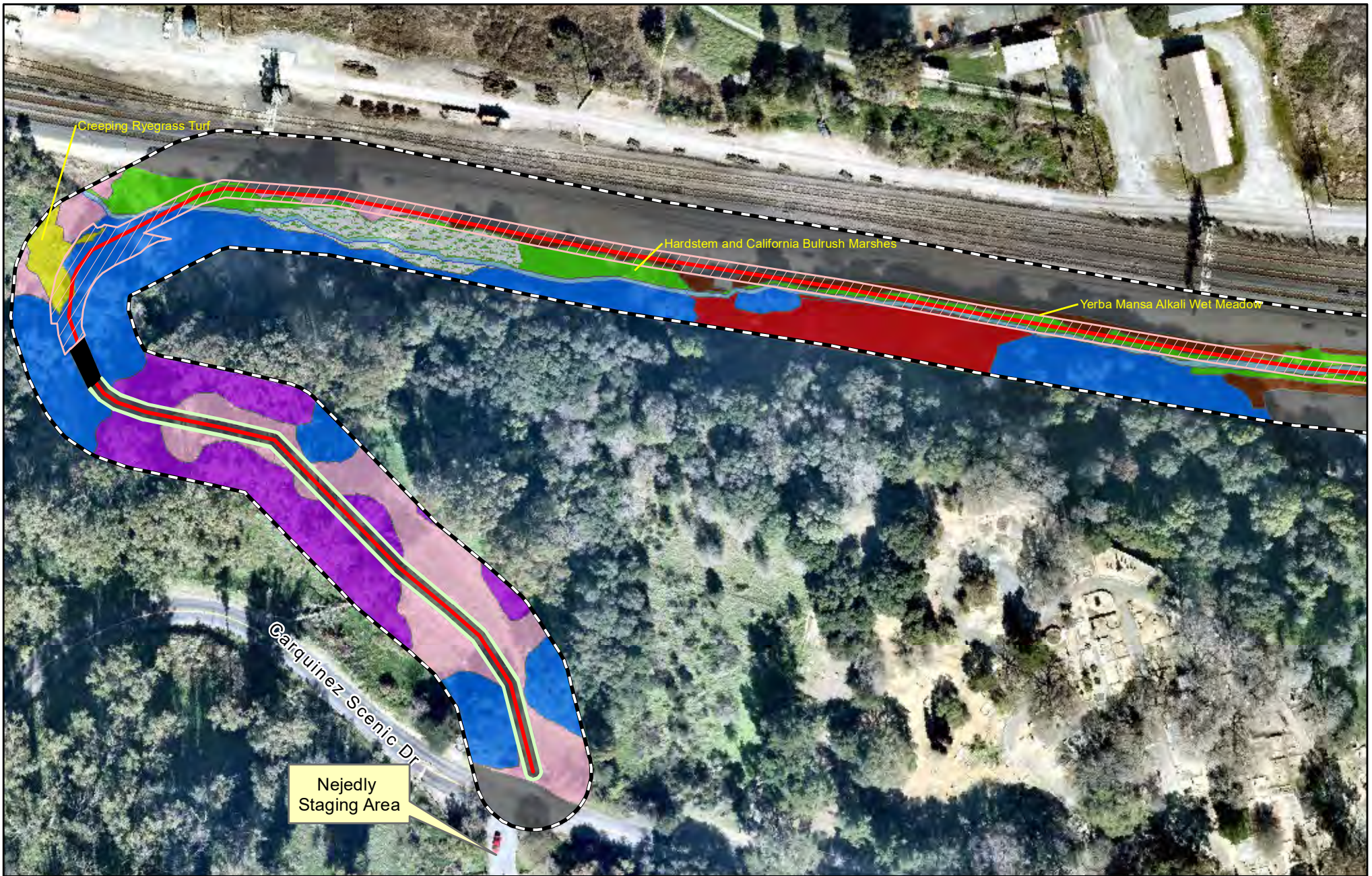


Coordinate System: NAD 1983 UTM Zone 10N
 Projection: Transverse Mercator
 Datum: North American 1983
 Vertical Datum: NAVD88, U.S. Feet
 1 in = 183 ft

Created on May 26, 2020

Imagery Data:
 Feb 14, 2020

Delineators: Natasha Dvorak and Bridget Sousa
 Delineation dates: May 12, 2020

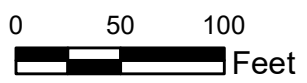


East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 4.1 - Impacts Map
 Segment 1 & Segment 2 (West)
 May 2020



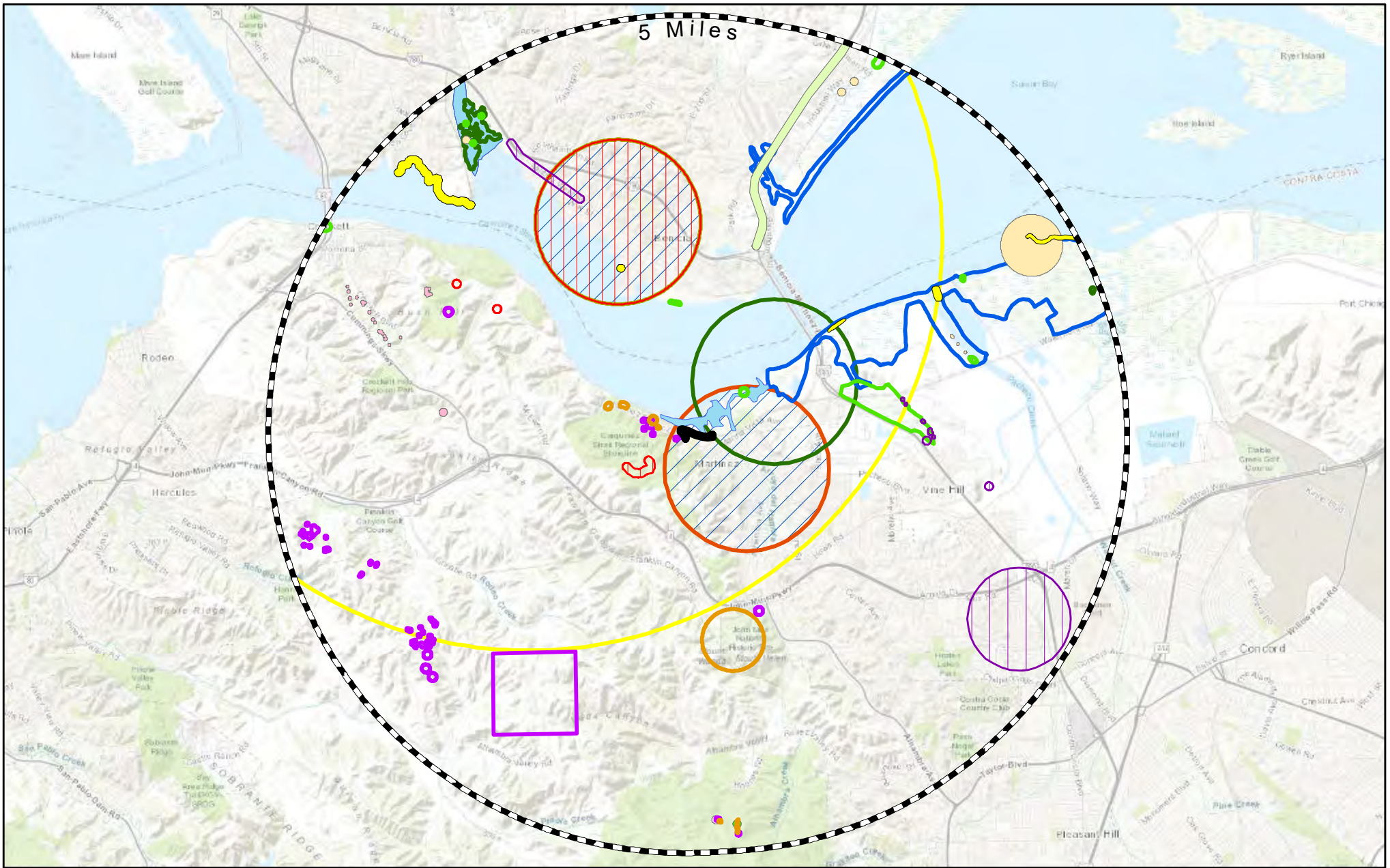


- Martinez Bay Trail
- Biological Survey Area
- Habitats**
- Arroyo Willow Thickets
- California Sagebrush Scrub
- Coast Live Oak Woodland and Forest
- Creeping Ryegrass Turf
- Developed
- Eucalyptus Grove
- Freshwater and Brackish Marshes
- Low Flow Channel
- Ruderal
- Wild oats and Annual Brome Grassland
- Permanent Impacts

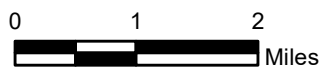


East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 4.2 - Impacts Map
 Segment 2 (East)
 May 2020

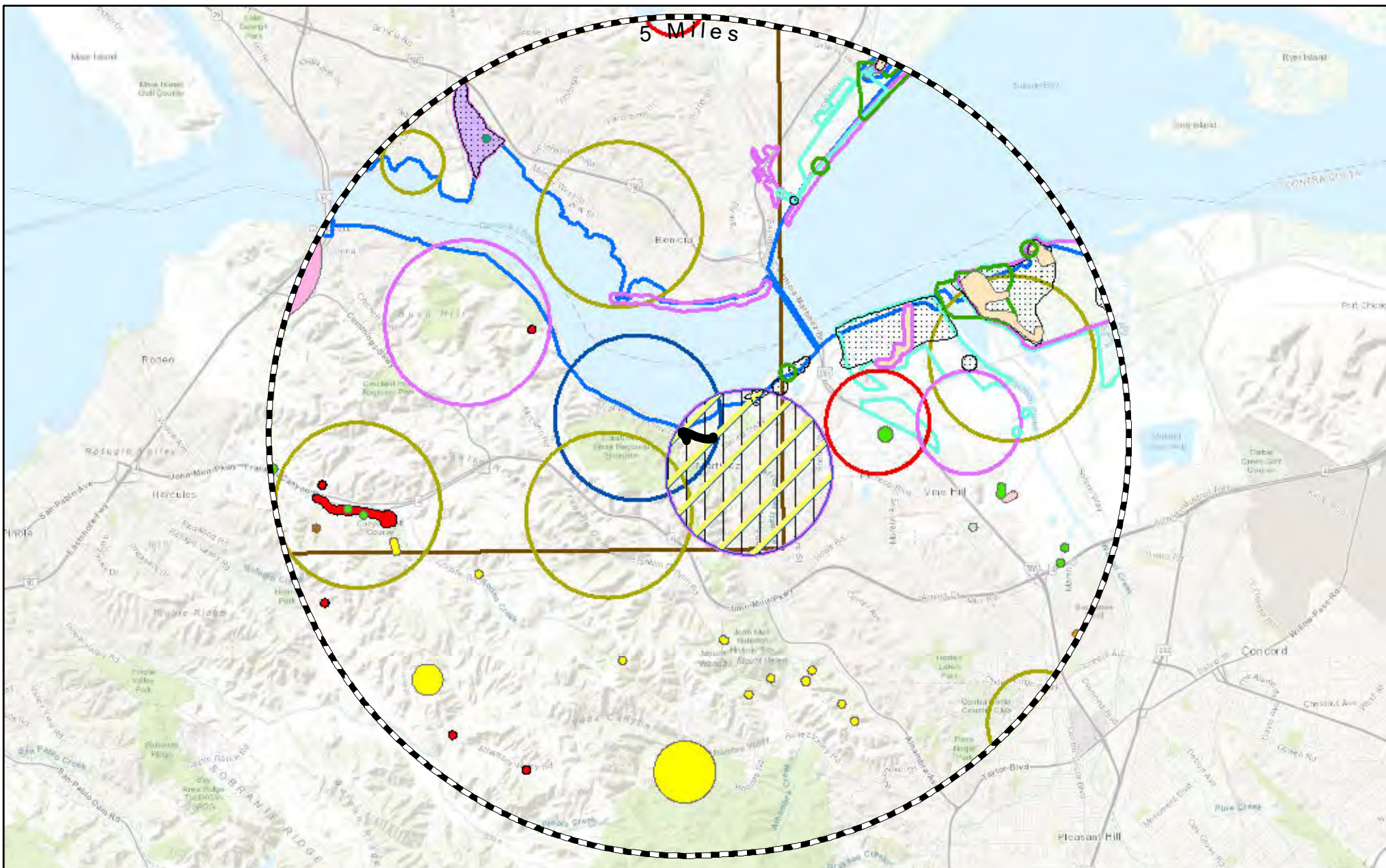




- | | | |
|--------------------------|-----------------------------|--------------------------|
| Biological Survey Area | Delta tule pea | bent-flowered fiddleneck |
| Bolander's water-hemlock | Diablo helianthella | big tarplant |
| Carquinez goldenbush | Jepson's coyote-thistle | long-styled sand-spurrey |
| Coastal Brackish Marsh | Marin knotweed | oval-leaved viburnum |
| Congdon's tarplant | Mason's lilaeopsis | saline clover |
| | Mt. Diablo fairy-lantern | soft salty bird's-beak |
| | Northern Coastal Salt Marsh | western leatherwood |
| | Suisun Marsh aster | |



East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 5 - CNDDDB Plant Records
 May 2020



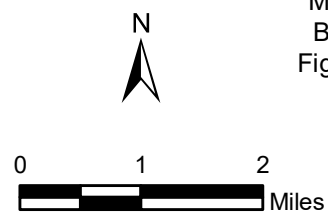
Biological Survey Area
CNDB - Wildlife Occurrences
CDFW - May 2020

- Alameda whipsnake
- American peregrine falcon
- Bridges' coast range shoulderband
- California Ridgway's rail

- California black rail
- California linderella
- California red-legged frog
- Cooper's hawk
- Sacramento splittail
- San Pablo song sparrow
- Suisun shrew

- Suisun song sparrow
- big free-tailed bat
- burrowing owl
- longfin smelt
- northern harrier
- obscure bumble bee
- salt-marsh harvest mouse

- saltmarsh common yellowthroat
- tricolored blackbird
- western bumble bee
- western pond turtle
- yellow rail



East Bay Regional Park District
 Martinez Bay Trail Project Phase II
 Biological Resources Assessment
 Figure 6 - CNDB Wildlife Records
 May 2020

Appendix B. USFWS IPaC and NMFS Species Lists



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2024-0026203
Project Name: Martinez Trail Phase II

December 13, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location 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 IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC 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: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

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 Code 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:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

PROJECT SUMMARY

Project Code: 2024-0026203
Project Name: Martinez Trail Phase II
Project Type: Road/Hwy - New Construction
Project Description: Construction of approximately 3,100 feet of trail running from Nejedly Staging Area to Berrellesa Street.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.01952875,-122.14537999487219,14z>



Counties: Contra Costa County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/613	Endangered

BIRDS

NAME	STATUS
California Clapper Rail <i>Rallus longirostris obsoletus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	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 final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

REPTILES

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Northwestern Pond Turtle <i>Actinemys marmorata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
Foothill Yellow-legged Frog <i>Rana boylei</i> Population: Central Coast Distinct Population Segment (Central Coast DPS) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5133	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

FLOWERING PLANTS

NAME	STATUS
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Soft Bird's-beak <i>Cordylanthus mollis ssp. mollis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8541	Endangered

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

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Martinez Bay Trail Project Phase II – NMFS Species Lists. Project occurs on the following USGS 7.5-minute quadrangle:

- Benicia – 38122-A2

Quad Name **Benicia**

Quad Number **38122-A2**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - **X**

SRWR Chinook Salmon ESU (E) - **X**

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) - **X**

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) - **X**

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat - **X**

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat - **X**

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) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

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

ESA Pinnipeds

Guadalupe Fur Seal (T) -
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 -

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 -
MMPA Pinnipeds - **X**

Appendix C. Representative Photographs

Appendix C. Representative Photographs



Natural Environment Study (Minimal Impacts)



Photo 5. *Elymus* sp. grassland with mixed annual grasses and teasels.



Photo 6. Pedestrian bridge crossing the unnamed channel occurring along the alignment.



Photo 7. Eucalyptus and oak – bay woodland habitats occurring near Nejedly Staging area.



Photo 8. Mixed ornamental palms, bay, and willow species occurring south of the pedestrian bridge.