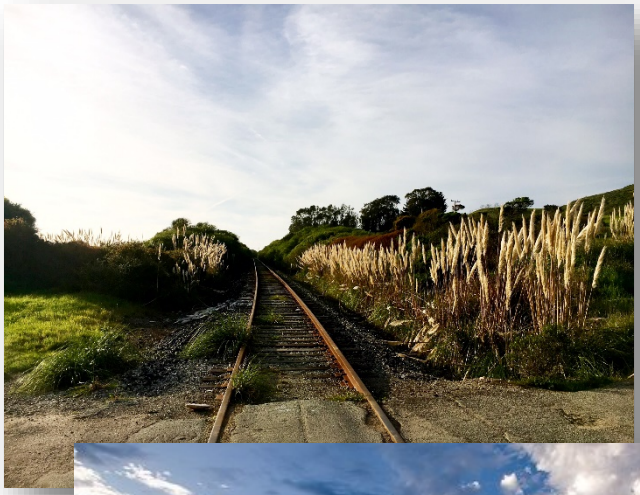
NORTH COAST RAIL TRAIL



CA FLAP SCR T5(1)
SANTA CRUZ COUNTY, CA

ENVIRONMENTAL ASSESSMENT

Appendices

Prepared For:

U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division
Lakewood, Colorado

October 23, 2020

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APPENDIX A

Plant Species Observed in the Study Area

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Plant Species Observed in the Study Area

Latin Name	**Common name**	**Family**
Achillea millefolium	yarrow	Asteraceae
Agrostis lacuna-vernalis	vernal pool bentgrass	Poaceae
Ambrosia chamissonis	beach bur-sage	Asteraceae
Ammophila arenaria	European beachgrass	Poaceae
Apium graveolens	celery	Apiacea
Artemisia pycnocephala	coastal sagewort	Asteraceae
Avena fatua	oat grass	Poaceae
Baccharis pilularis	coyote brush	Asteraceae
Baccharis salicifolius	mulefat	Asteraceae
Brassica sp.	mustard	Brassicaceae
Briza major	rattlesnake grass	Poaceae
Briza minor	little rattlesnake grass	Poaceae
Bromus catharticus	rescuegrass	Poaceae
Bromus diandrus	ripgut brome	Poaceae
Carduus pycnocephalus	Italian thistle	Asteraceae
Castilleja sp.	paintbrush	Orobanchaceae
Clarkia sp.	clarkia	Onagraceae
Conium maculatum	poison hemlock	Apiacea
convulvulus arvensis	bindweed	Convolvulaceae
Conyza canadensis	horseweed	Asteraceae
Cortaderia jubata	Jubata grass	Poaceae
Delairea odorata	Cape ivy	Asteraceae
Distichlis spicata	saltgrass	Poaceae
Echium candicans	Pride of Madeira	Boraginaceae
elymus glaucus	blue wildrye	Poaceae
Epilobium sp.	willow herb	Onagraceae
Equisetum sp.	horsetail	Equisetaceae
Erigeron glaucus	seaside daisy	Asteraceae
Eriogonum latifolium	coast buckwheat	Polygonaceae
Eriophyllum staechadifolium	lizard tail	Asteraceae
Erodium sp.	storksbill	Geraniaceae
Eschscholzia californica	California poppy	Papaveraceae
Euphorbia sp.	spurge	Euphorbiaceae
Festuca bromoides	brome fescue	Poaceae
Festuca myuros	sixweeks grass	Poaceae
Festuca perennis	perennial wildrye	Poaceae
Foeniculum vulgare	fennel	Apiacea
gnaphalium sp.	cudweed	Asteraceae
Grindelia sp.	gumplant	Asteraceae
Helminthotheca echioides	bristley oxtongue	Asteraceae

Latin Name	**Common name**	**Family**
Heracleum maximum	cow parsnip	Apiacea
Hesperocyparis macrocarpa	Monterey cypress	Cupressaceae
Heteromeles arbutifolia	California toyon	Rosaceae
Hirschfeldia incana	short pod mustard	Brassicaceae
Holcus lanatus	velvet grass	Poaceae
Hordeum sp.	meadow barley	Poaceae
Hypochaeris radicata	rough cats ear	Asteraceae
Juncus sp.	rush	Juncaceae
Lactuca seriola	prickly lettuce	Asteraceae
Lemna sp.	duckweed	Araceae
Limonium sinuatum	sea-lavender	Plumbaginaceae
Lotus corniculatus	trefoil	Fabaceae
Lupinus arboreus	yellow bush lupine	Fabaceae
Lupinus sp.	lupine	Fabaceae
Lysimachia arvensis	scarlet pimpernell	Myrsinaceae
Lythrum salicaria	purple loosestrife	Lythraceae
Malva pseudolavatera	Cretan mallow	Malvaceae
Marah fabacea	wild cucumber	Cucurbitaceae
Matricaria discoidea	pineapple weed	Asteraceae
Medicago polymorpha	California burclover	Fabaceae
Mimulus aurantiacus var. aurantiacus	sticky monkey flower	Phrymaceae
Morella californica	Wax myrtle	Myricaceae
Oenanthe sarmentosa	water parseley	Apiacea
Oenothera sp.	prim rose	Onagraceae
Opuntia sp.	beavertail	Cactaceae
Osmorhiza sp.	sweet cicely	Apiaceae
Pinus sp.	pine	Pinaceae
Plantago coronopus	cut leaf plantain	Plantaginaceae
Plantago lanceolata	English plantain	Plantaginaceae
polypogon interruptus	ditch beard grass	Poaceae
Polypogon monspeliensis	annual beard grass	Poaceae
Pseudotsuga menziesii	Douglas-fir	Pinaceae
Pteridium aquilinum var. pubescens	bracken fern	Dennstaedtiaceae
Quercus agrifolia	Coast live oak	Fagaceae
Raphanus sativus	radish	Brassicaceae
Rosa californica	California rose	Rosaceae
Rubus armeniacus	Himalayan blackberry	Rosaceae
Rumex salicifolius	willow dock	Polygonaceae
Salix laevigata	red willow	Salicaceae
Salix lasiolepis	arroyo willow	Salicaceae
Sambucus racemosa var. racemosa	red elderberry	Adoxaceae
schoenoplectus sp.	bulrush	Cyperaceae

Latin Name	**Common name**	**Family**
Scrophularia californica	California bee plant	Scrophulariaceae
Sedum sp.	stonecrop	crassulaceae
Senecio vulgaris	common groundsel	Asteraceae
Spergularia sp.	sand spurrey	Caryophyllaceae
Stachys ajugoides	hedge nettle	Lamiaceae
Tetragonia tetragonoides	New Zealand spinach	Aizoaceae
Toxicodendron diversilobum	poison oak	Anacardiaceae
Tropaeolum majus	garden nasturtium	Tropaeolaceae
Typha latifolia	cattail	Typhaceae
Urtica dioica ssp. Gracilis	stinging nettle	Urticaceae
Verbena sp.	vervain	Verbenaceae
Vicia sativa	spring vetch	Fabaceae
Zantedeschia aethiopica	callalily	Araceae

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APPENDIX B
Habitats within the Study Area

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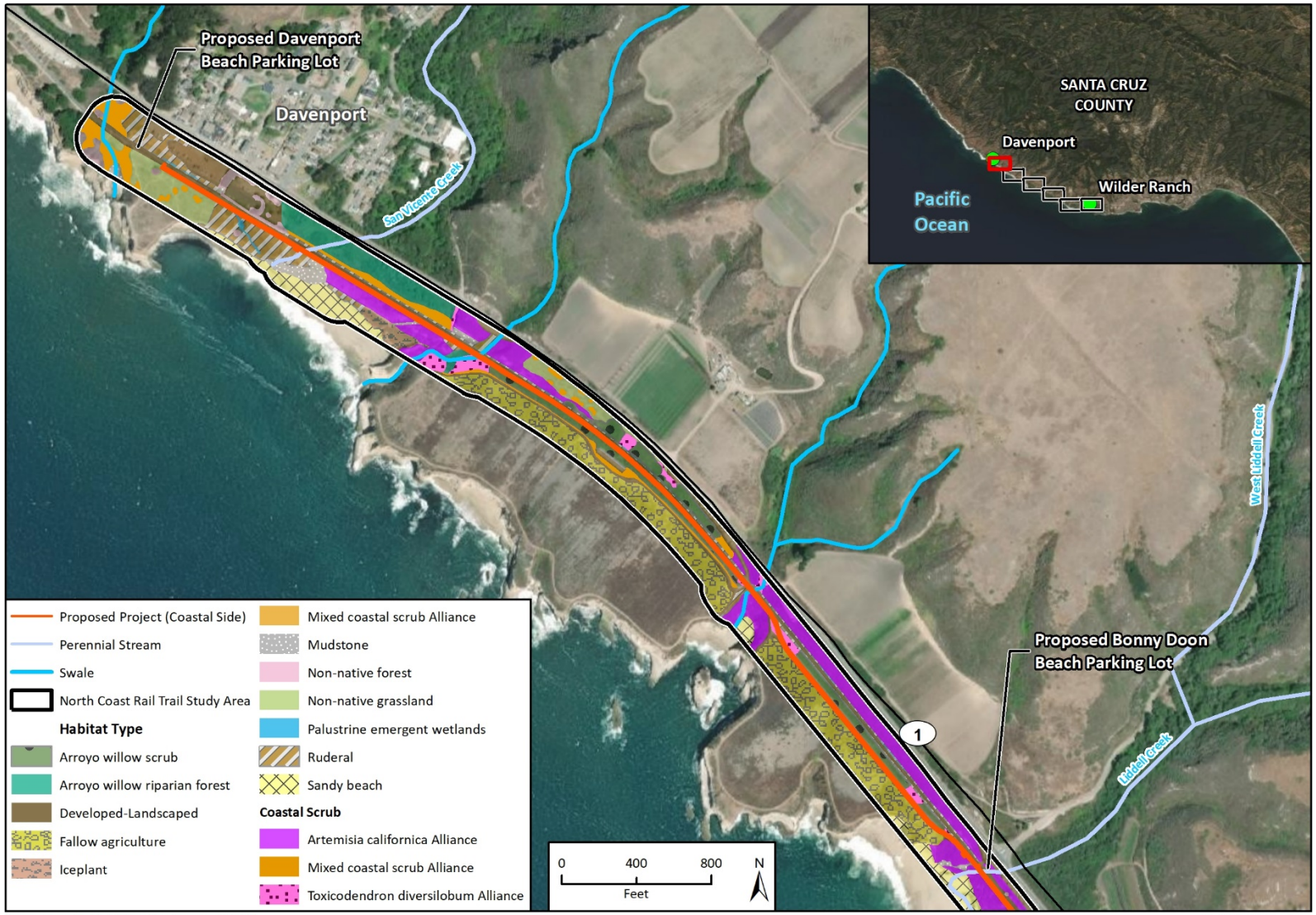
Figure 1a - Study Area Habitat Types



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Additional data provided by EcoSystems West, 2018.

Fig 3.4-1a-f Habitat Types

Figure 1b Study Area Habitat Types

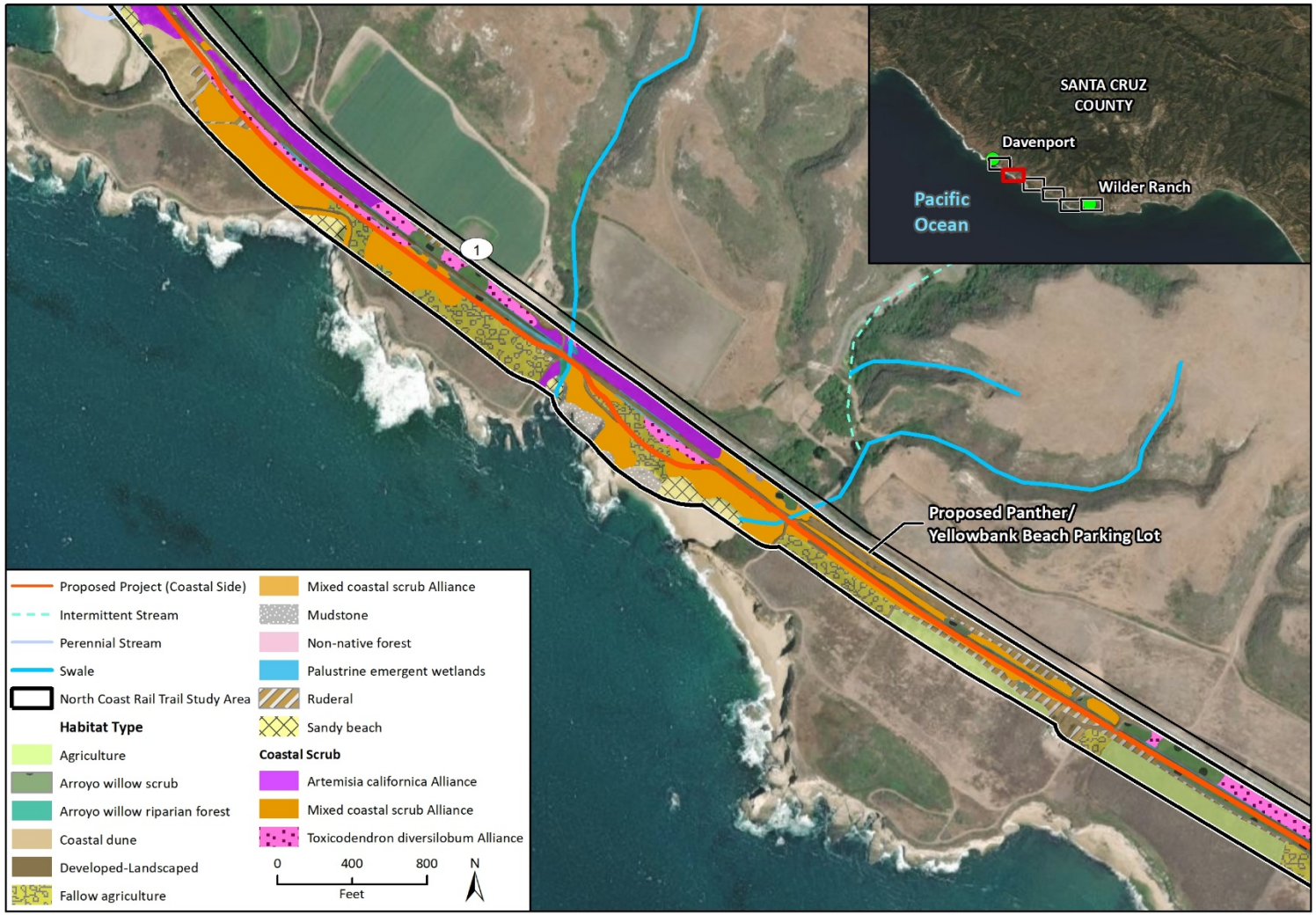

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Fig 3.4-1a-f Habitat Types

Figure 1c - Study Area Habitat Types

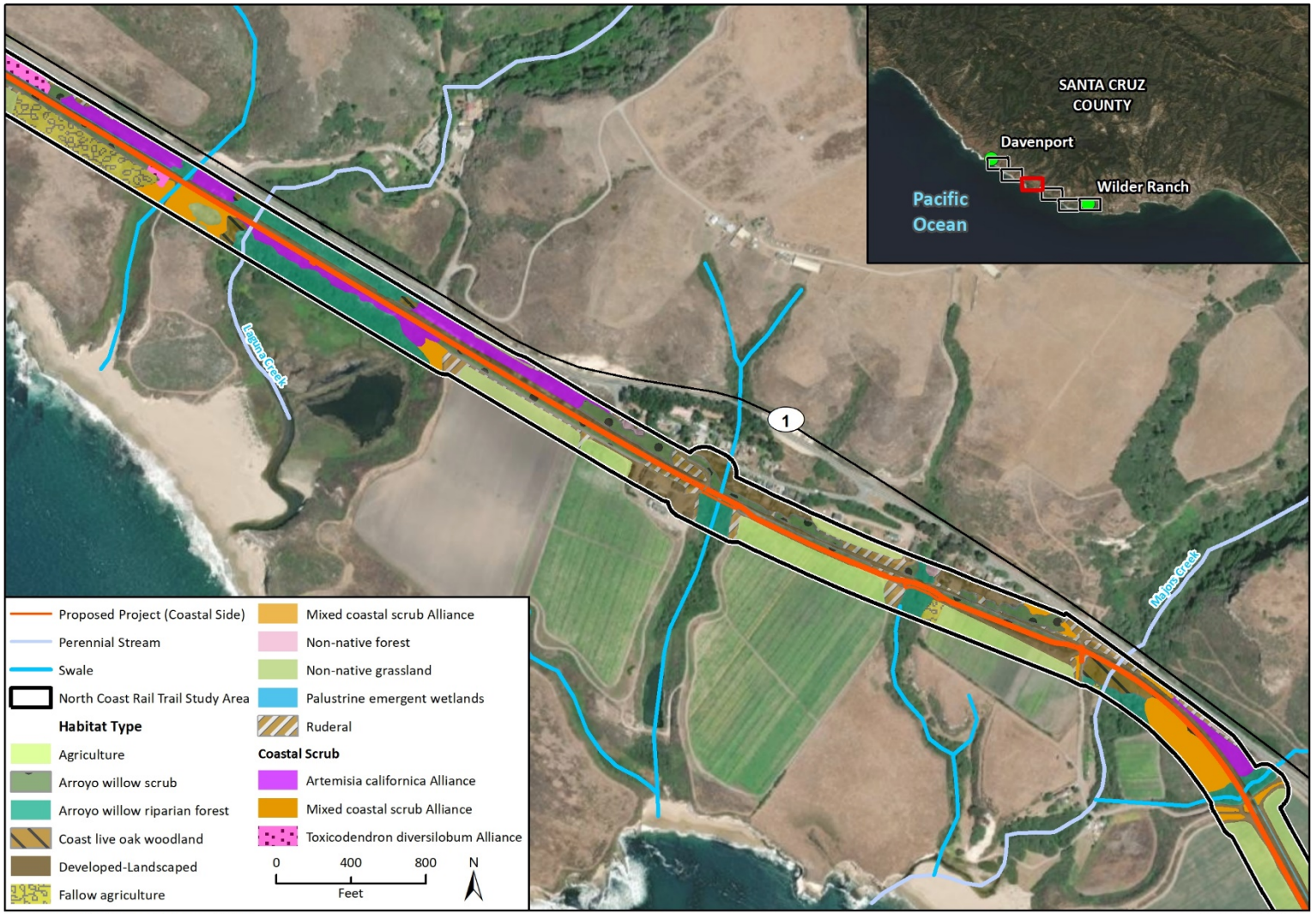

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Fig 3.4-1a-f Habitat Types

Figure 1d - Study Area Habitat Types

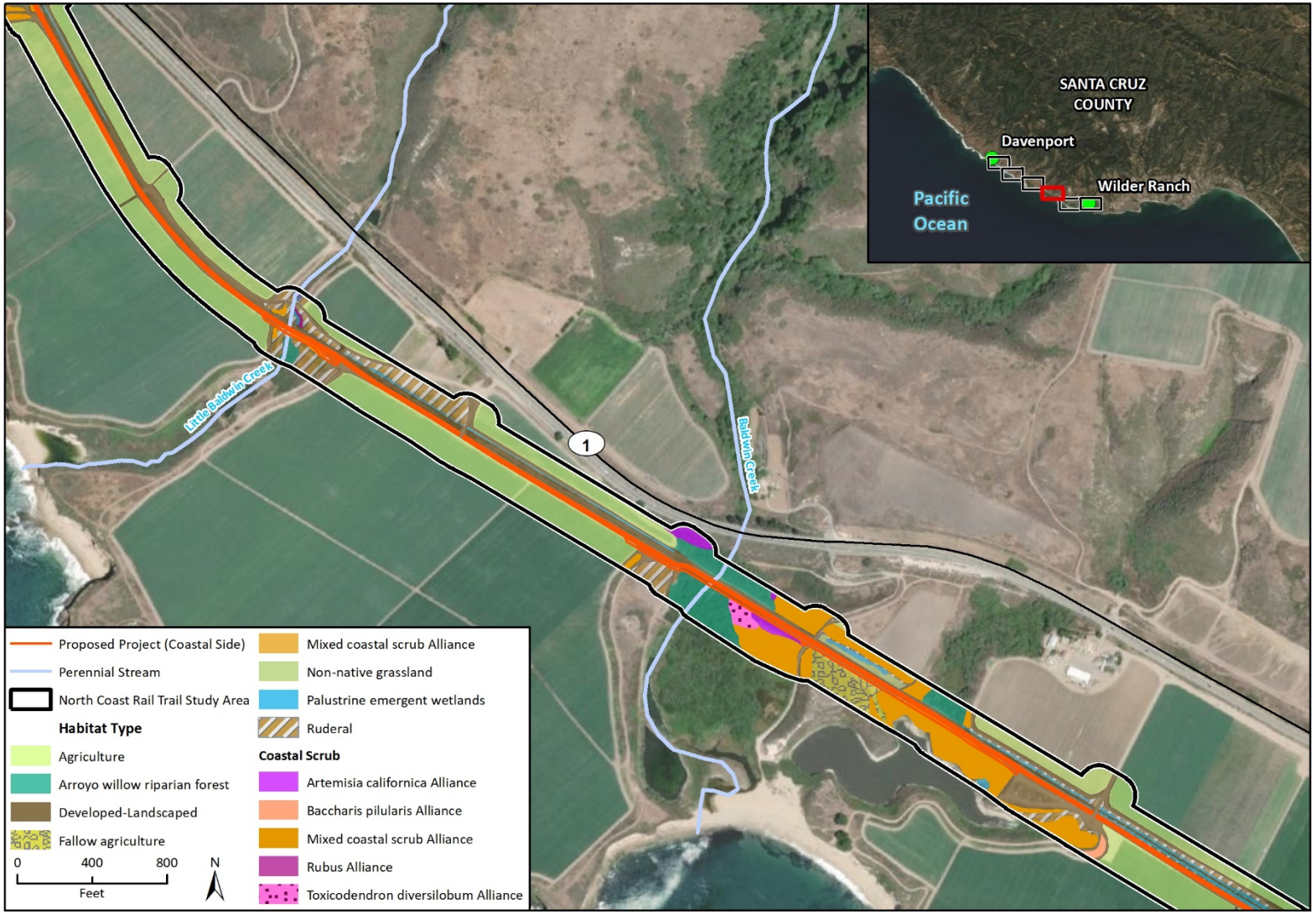

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Fig 3.4-1a-f Habitat Types

Figure 1e - Study Area Habitat Types

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Fig 3.4-1a-f Habitat Types

Figure 1f - Study Area Habitat Types

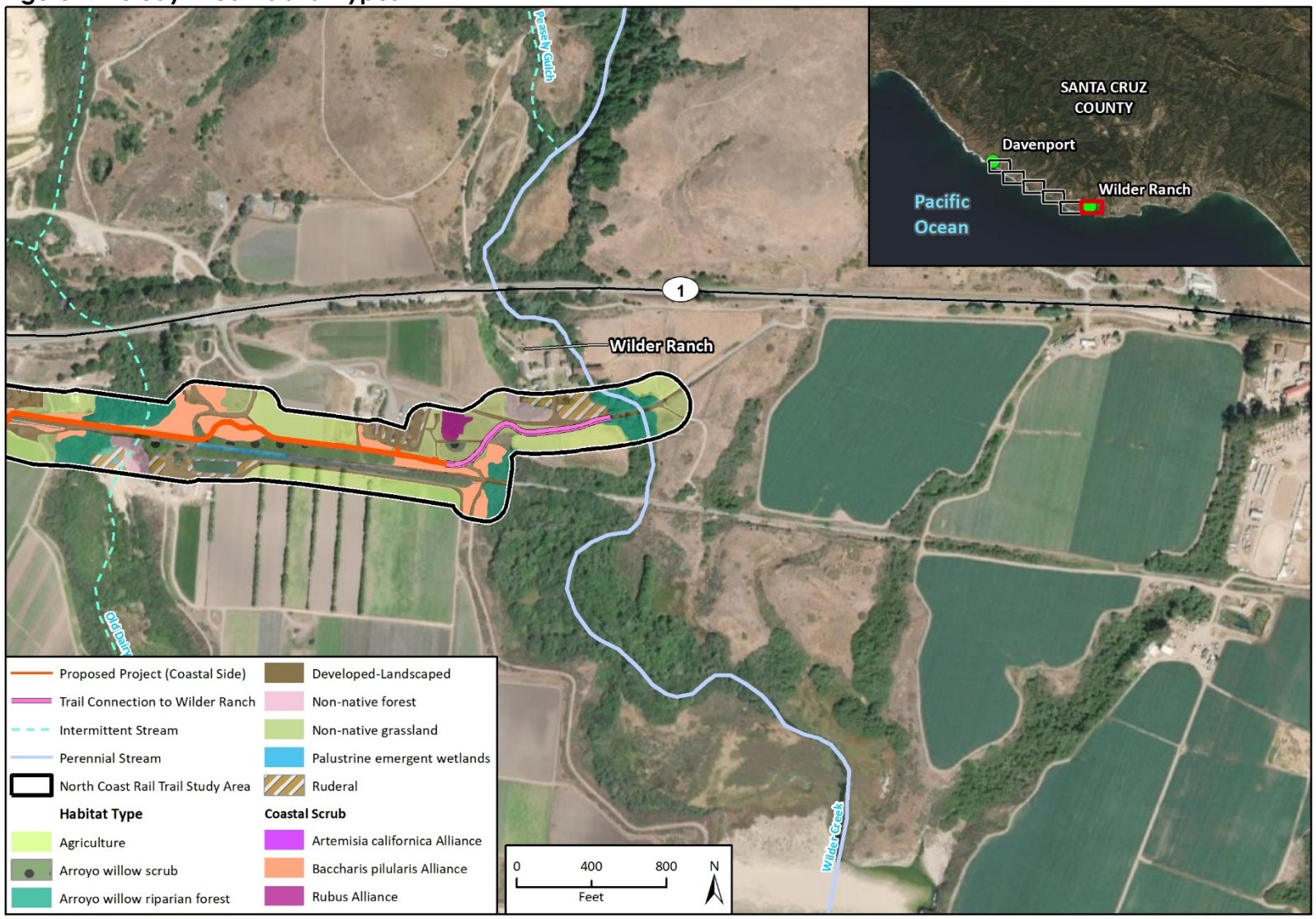

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Fig 3.4-1a-f Habitat Types

APPENDIX C
Federal ESA Listed Species

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Table 1 - Federal ESA Listed Species with Potential to Occur within the Action Area

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
		Amphibians		
California red-legged frog ***Rana draytonii***	Threatened	Found at elevations up to 1,500 feet in Mediterranean climatic zones. Requires aquatic, riparian, and upland habitat areas for different life events. Breeds primarily in aquatic habitat deeper than 2 feet with shrubby riparian or emergent vegetation; specifically found in deep pools, backwaters in streams and creeks, ponds, marshes, sag ponds, dune ponds, and lagoons.[1,2] The species has been documented within the action area.	The entire action area is within critical habitat.	**Yes**. Suitable habitat is present and this species is known to occur within the action area.
California tiger salamander ***Ambystoma californiense***	Threatened	Primarily inhabits annual grasslands and open woodlands. It requires upland habitat that is occupied by small burrowing mammals that create underground burrow systems utilized by the salamanders throughout the year. Upland habitats surrounding known breeding pools are typically dominated by grassland, oak savanna, or oak woodland. Large areas of upland habitat, with multiple breeding ponds, are necessary for the species to persist.[3]	Critical habitat is located approximately 22 miles northeast of the action area.	**No**. Suitable habitat may exist near the action area but records indicate the closest species occurrence is 18 miles southeast of the action area.
		Birds		
California least tern ***Sternula antillarum browni***	Endangered	Occurs in California on seacoasts, beaches, bays, estuaries, lagoons, lakes, and rivers. Nests in colonies on open, flat beaches or mudflats alongside lagoons, estuaries, or artificial islands made of dredge spoils. Colonies identified in San Francisco Bay.[4]	Critical habitat has not been designated for the species.	**No**. Suitable habitat is not present. Suitable habitat exists near the action area but records indicate the closest species occurrence is 33 miles north of the action area.
Least bell's vireo ***Vireo bellii pusillus***	Endangered	Inhabits structurally diverse stands of shrubs and small trees (commonly early successional habitats) along rivers and streams. It is an obligate riparian species during the breeding season while it tends to occur in mesquite scrub vegetation arroyos and hedgerows along agricultural fields and rural residential areas in the winter.[5]	Critical habitat is located in southern California and not in the vicinity of the action area.	**No**. Suitable habitat exists near the action area but records indicate the closest species occurrence is 31 miles east of the action area.

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Marbled murrelet *Brachyramphus marmoratus*	Threatened	Spend the majority of their lives on the ocean, but come inland to nest. They generally nest in old-growth forests, characterized by large trees, multiple canopy layers, and moderate to high canopy closure. Nests are typically located close to the ocean so the birds can fly to and from nest sites.[6,7]	A southern portion of the action area limits cross through approximately 1.4 miles of critical habitat (Unit CA-15).	**No**. Suitable habitat is not present along the action area. The proposed project would not impact any physical or biological features within the area designated as critical habitat. Therefore, the proposed project is anticipated to have *no effect* on critical habitat.
Southwestern willow flycatcher *Empidonax traillii extimus*	Endangered	Breeds in areas from near sea level to approximately 8,500 feet in vegetation alongside rivers, streams, or other wetlands (riparian habitat). For nesting, the species requires dense riparian habitats with microclimatic conditions dictated by the local surroundings.[8]	Critical habitat is located in southern California and not in the vicinity of the action area.	**No**. While suitable habitat may exist near the project area, there are no records within 100 miles of the project area and the species is not known to breed north of Santa Barbara County.
Western snowy plover *Charadrius alexandrines nivosus*	Threatened	Most commonly nests on coastal beaches, in sand pits, dune-backed beaches near creek and river mouths, and near salt pans and estuaries on flat, open areas with sparse to absent vegetation usually within 100 meters of water.[9]	The closest area of critical habitat is located within 2,000 feet of the southern end of the project.	**No**. While areas of suitable habitat are located along the beaches in the vicinity of the project area, none of these areas would be impacted by the project and are beyond the action area. The nearest occurrence, documented in 1987, is at Laguna Beach 0.25 mile west of the action area. The difference in elevation between the project and suitable habitat provides a barrier to potential project effects.
Insects				
Ohlone tiger beetle *Cicindela ohlone*	Endangered	Endemic to Santa Cruz County along coastal terraces with remnant patches of native grassland habitat. Associated with soil types characterized by shallow, pale, poorly drained clay or sandy clay soil. Typically found along trails or barren areas among low, sparse vegetation within the grassland habitat.[10]	Critical habitat has not been designated for the species.	**No**. Species has been document approximately 1 mile from the action area. However, species unlikely to occur in project area as it mostly borders agricultural habitats considered unsuitable.
Zayante band-winged grasshopper *Trimerotropis infantilis*	Endangered	Sandy soils and open parklands. The species is known only from the Zayante sandhills of Santa Cruz County, California, where its distribution occurs within an area less than four square miles. Within this area, populations are concentrated between the communities of Mt. Hermon to the southwest, Scotts Valley to the East, and Quail Hollow County Park to the north.[11]	Critical habitat is located approximately 4 miles northeast of the action area.	**No**. Although suitable habitat is present in the vicinity of the action area, the project would not disturb the areas that the species is endemic to.

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Fish				
Tidewater Goby ***Eucyclogobius newberryi***	Endangered	Tidewater gobies are adapted to habitats within coastal lagoons and the highest reaches of the brackish zone of larger estuaries, from San Diego County to Del Norte County. They are most commonly found in water less than 1 meter (3.3 feet) deep.[12]	Critical habitat is present outside the action area, at the lagoons near the mouths of Laguna Creek and Baldwin Creek.	**No.** Although suitable habitat is present in the vicinity of the action area, no work would be done in areas of potential habitat or in perennial or intermittent creeks which may flow into potential habitat.
CCC Coho Salmon, ESU ***Oncorhynchus kisutch***	Endangered	CCC coho salmon spend the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat includes small streams with stable gravel substrates. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean.	**Yes.** Critical habitat within the action area includes accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and San Lorenzo River in California.	**Yes.** The species has been identified in San Vincent Creek.
CCC Steelhead, DPS ***Oncorhynchus mykiss***	Threatened	CCC steelhead are found along the entire Pacific Coast. Deep low-velocity pools in streams are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt.	**Yes.** Critical habitat within the action area includes San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, and Baldwin Creek.	**Yes.** Species has been identified in San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, and Baldwin Creek.
Reptiles				
San Francisco garter snake ***Thamnophis sirtalis tetrataenia***	Endangered	Most commonly occur in the vicinity of persistent water (mainly ponds, lakes, marshes, and sloughs), although they may also occur along temporary ponds and seasonal waterbodies. Areas with dense emergent vegetation adjacent to these waterbodies are preferred.[13]	Critical habitat has not been designated for the species.	**Yes.** Suitable habitat may exist along project area in aquatic habitats. Records indicate the closest species occurrence is approximately 6 miles north of the northern end of the project area limits.
Plants				

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Ben Lomond spineflower *Chorizanthe pungens* var. *hartwegiana*	Endangered	Found on sandy Zayante soils that are the basis for the Zayante sandhill communities in the Santa Cruz Mountains. The plant's entire distribution is within Santa Cruz County, and populations are located on private lands and within State and County parks.[14]	Critical habitat has not been designated for the species.	**No**. Suitable habitat is not present in the project area. Known locations are east of the action area.
Ben Lomond wallflower *Erysimum teretifolium*	Endangered	Known only from the sandhills of Santa Cruz County, and is distributed over an area approximately 9 miles from east to west and 5 miles from north to south. Within this area, most of the populations occur in an area between the communities of Ben Lomond, Mount Hermon, and Glenwood, while outliers are located in the Bonny Doon area (approximately 5 miles to the west) and one is located in Beulah Park (approximately 3 miles to the south).[15]	Critical habitat has not been designated for the species.	**No**. Suitable habitat is not present. Closest recorded occurrences are 3 miles northeast and at higher elevations than the action area.
Marsh Sandwort *Arenaria paludicola*	Endangered	Found in wetland areas with standing water or saturated acidic soils from sea level to 1,480 feet. Only two populations of the species are known to occur in the United States.[16]	Critical habitat has not been designated for the species.	**No**. Species not known to occur in the vicinity of the action area.
Menzies' wallflower *Erysimum menziesii*	Endangered	Known from at least 16 extant occurrences, distributed predominately in the nearshore dune community of four disjunct dune systems in northern and central California: Humboldt Bay in Humboldt County, Ten Mile River in Mendocino County, the Marina Dunes at Monterey Bay, and the Monterey Peninsula in Monterey County. [17]	Critical habitat has not been designated for the species.	**No**. Suitable habitat is not present. Known locations are south of the action area.
Santa Cruz tarplant *Holocarpha macradenia*	Threatened	Historically, habitat occurred on grasslands and prairies on coastal terraces in elevations below 330 feet, from Monterey County north to Contra Costa and Marin Counties. Soils are associated with coastal terrace prairies.[18]	Critical habitat is located approximately 4 miles northeast of the action area.	**No**. Thirteen of the natural populations occur in Santa Cruz County.[15] While suitable habitat may be present in the vicinity of the action area, these areas would not be impacted.
Scotts Valley Polygonum *Polygonum hickmanii*	Endangered	The species is a narrow endemic plant and restricted to Scotts Valley, Santa Cruz County, California. Grows on gently-sloping to nearly-level thin soil over outcrops of Santa Cruz mudstone and Purisima sandstone. The species occurs in populations at two sites approximately one mile apart at the northern end of Scotts Valley (the Polo Ranch, and north of Casa Way).[19]	Critical habitat is located approximately 9 miles northeast of the action area.	**No**. The project would not impact areas where the species is known to occur.

Species Name	Status	Habitat/Range	Critical Habitat	Potential to be Affected by Proposed Project?
Scotts Valley spineflower *Chorizanthe robusta* var. *hartwegii*	Endangered	The species is a narrow endemic plant restricted to Scotts Valley, Santa Cruz County, California. The variety grows in colonies in wildflower fields on patches of exposed bedrock overlain with a thin layer of soil. The geographic range comprises approximately 0.5 square mile.[20]	Critical habitat is located approximately 9 miles northeast of the action area.	**No**. The project would not impact areas where the species is known to occur.

References:

Marine fish and invertebrate species will be addressed in a separate National Marine Fisheries Services Biological Assessment, along with any marine mammals and reptiles. [1] (USFWS, 2002), [2] (USFWS, 2010b), [3] (USFWS, 2015) [4] (NatureServe, 2015), [5] (USFWS, 1998a), [6] (USFWS, 2004a), [7] (USFWS, 2011a), [8] (USFWS, 2014a) [9] (USFWS, 2007a), [10] (USFWS, 2009a), [11] (USFWS, 2009b), [12] (USFWS, 2005) [13] (USFWS, 1985), [14] (USFWS, 2012), [15] (USFWS, 2008a), [16] (USFWS, 1998b), [17] (USFWS, 2008b), [18] (USFWS, 2014b), [19] (USFWS, 2009c) [20] (USFWS, 2009d).

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APPENDIX D
California Red-legged Frog Habitat

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Figure 1a - California Red-legged Frog Habitat

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Figure 1b - California Red-legged Frog Habitat

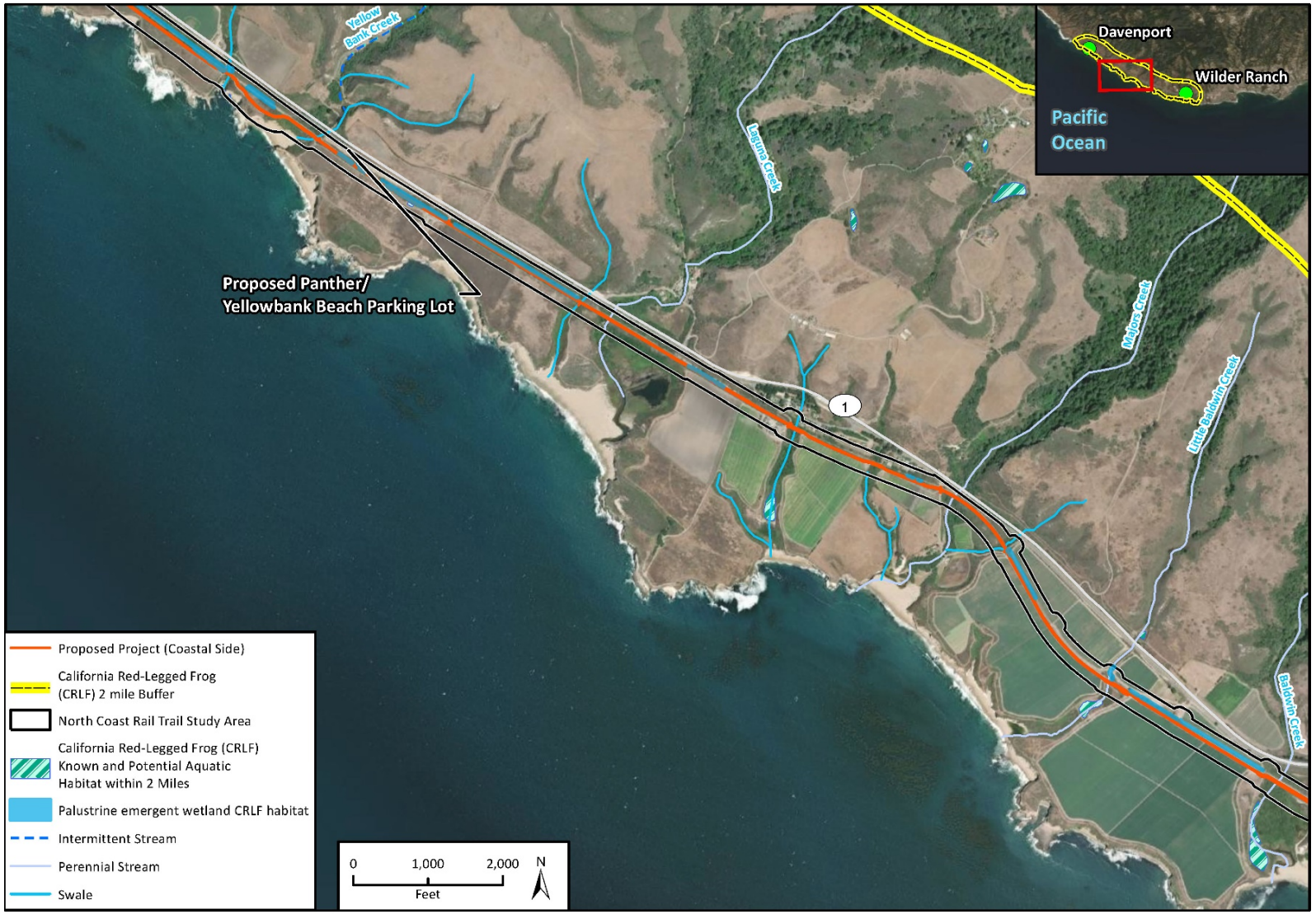

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Fig 3.4-4a-c CRLF Habitat

Figure 1c - California Red-legged Frog Habitat

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Fig 3.4-4a-c CRLF Habitat

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APPENDIX E

Special Status Species with Potential to Occur in Project Area

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Table 1: Special Status Species with the Potential to Occur within the Project Area

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Animals					
American badger ***Taxidea taxus***	-/-/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceious habitats, with friable soils. Needs sufficient food, friable soils and open uncultivated ground. Preys on burrowing rodents.	**Yes**. Suitable habitat exists and the species has historically occurred near the project area. The closest recorded CNDDB occurrence is 3 miles east of the project area from 2004.	**Yes.** The proposed action may impact this species due to construction-related activities, including: increased presence of human activity, ground disturbance, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect.
American Peregrine Falcon ***Falco peregrinus anatum***	-/-/FP	Coastal sage scrub communities including gray pine-oak woodland, chaparral, Pacific ponderosa pine forest, mountain meadow, riparian deciduous woodland, and mixed-conifer. Nesting occurs on cliff edges, tall trees, buildings, and other man-made structures.	**Yes.** Suitable habitat characteristics are present in the vicinity of the project area and the project area is located within the mapped year-long range for species. An active nest was identified on a cliff face adjacent to the project area during field surveys conducted by Jacobs on June 27, 2016. Species has also been documented in Majors Creek watershed (Santa Cruz County Regional Transportation Commission, 2014).	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Bald Eagle ***Haliaeetus leucocephalus***	-/SE/FP	Seacoasts, rivers, large lakes, and other large areas of open water. Nest, perch, and roost primarily in old-growth and mature stands of conifers or hardwoods.	**No**. The project area is located with the overall range for the species; however, CNDDB records don't indicate any occurrences in the project vicinity. The closest CNDDB recorded occurrence is approximately 50 miles to the northwest.	**No.** The proposed action is not anticipated to affect the species through noise and visual disturbances because it is unlikely the species would be present during project activities.	**ESA:** N/A **CESA:** No effect. **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Bank Swallow ***Riparia riparia***	-/ST/-	Colonial nester. Nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Yes**. Suitable habitat exists and the species has historically occurred near the project area. The closest recorded CNDDB occurrence is 3 miles east of the southern end of project area.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Black Swift ***Cypseloides niger***	-/-/SSC	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely. Coastal belt of Santa Cruz and Monterey Counties; central and southern Sierra Nevada; San Bernardino & San Jacinto Mountains.	**Yes**. Suitable habitat exists and the species has historically occurred near the project area. There are numerous recorded occurrences west of the project area along the seaside cliffs.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect.
Burrowing Owl ***Athene cunicularia***	-/-/SSC	Occur in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals.	**Yes**. Suitable habitat exists and the species has occurred near the project area. The closest CNDDB documented sighting is from 2008 at Wilder Ranch State Park.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
California Black Rail ***Laterallus mamaicensis conturniculus***	-/ST/FP	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depth of 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	**No**. Suitable habitat exists in the vicinity of the project although not within the project limits. The closest recorded CNDDB occurrence is approximately 7 miles north at Waddell Creek Lagoon from 1998.	**No.** The proposed action is not anticipated to affect the species through noise and visual disturbances because it is unlikely the species would be present during project activities.	**ESA:** N/A **CESA:** No effect. **CEQA:** No effect.
California red-legged frog ***Rana draytonii***	FT/-/SSC	Found at elevations up to 1,500 feet in Mediterranean climatic zones. Requires aquatic, riparian, and upland habitat areas for different life events. Breeds primarily in aquatic habitat deeper than 2 feet with shrubby riparian or emergent vegetation; found in deep pools, backwaters in streams and creeks, ponds, marshes, sag ponds, dune ponds, and lagoons.	**Yes**. Suitable habitat is present and this species has been observed along the project area in wetlands adjacent to the existing rail corridor.	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any state regulatory protection and will not be discussed elsewhere in this document. This species was analyzed further in the BA that was prepared for the USFWS.	**ESA:** May affect, is likely to adversely affect. **CESA:** N/A **CEQA:** Less than significant effect with mitigation measures.
Coho salmon – Central California Coast ESU ***Oncorhynchus kisutch***	FE/SE/-	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water & sufficient dissolved oxygen.	**Yes.** According to CalFish distribution data, CCC coho salmon have been documented in San Vincente Creek and Laguna Creek, both of which bisect the project area.	**Yes**. The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases. However, erosion and sediment control measures will be put in place to minimize effects to downstream water bodies.	**ESA:** May affect, but is not likely to adversely affect. **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Cooper's Hawk ***Accipiter cooperii***	-/-/WL	Variety of forest types and stand-structures. Prefers dense forest, large trees, and high canopy closures.	**Yes**. Suitable habitat exists and the species has occurred near the project area. The closest recorded CNDDB occurrence is 6 miles northeast of the project area from 1996.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect with mitigation measures.
Golden Eagle ***Aquila chrysaetos***	-/-/FP;WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Yes.** The project area is located with the overall range for the species. While nesting habitat is limited along the project area, the species may forage in the area. The closest CNDDB occurrence is a nest, observed active in 1989, approximately 22 miles northeast of the project.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Foothill yellow-legged frog ***Rana boylii***	-/-/SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-feed pools. Cobble-sized substrate for egg-laying. From sea level to 6,370 feet.	**Yes.** Potential habitat for this species may exist along the drainages that cross the project area and the project is within the range for the species. The closest CNDDB occurrence is approximately 7 miles east along Soquel Creek where numerous observations have been made between 1992 and 2008.	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect with mitigation measures.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Marbled murrelet ***Brachyramphus marmoratus***	FT/SE/-	Spends the majority of their lives on the ocean, but come inland to nest. Generally nests in old-growth forests characterized by large trees, multiple canopy layers, and moderate to high canopy closure. Nests are typically located close to the ocean so the birds can fly to and from nest sites.	**No**. Suitable habitat is not present. The closest CNDDB occurrence was a nest at Big Basin Redwoods State Park, located approximately 11 miles north of the project area. However, this observation is from 1974.	**No.** There is no nesting habitat along the project area. This species may occur in offshore areas and in the redwood forest in the region; however, project activities are not anticipated to impact the species.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Monterey dusky-footed woodrat ***Neotoma macrotis luciana***	-/-/SSC	Common to abundant in forest habitats of moderate canopy and moderate to dense understory; can be abundant in chaparral habitats.	**Yes.** Suitable habitat is present along the project area in forested and riparian areas. This species was observed within valley foothill riparian habitat within Wilder Ranch State Park (Santa Cruz County Regional Transportation Commission, 2014).	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect.
Osprey ***Pandion haliaetus***	-/-/WL	Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles of good fish-producing body of water.	**Yes**. Suitable habitat exists near the project area and the species may occur. The closest CNDDB occurrence is a nest located approximately 9 miles northeast from the project area.	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect with mitigation measures.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	-/-/SSC	San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**Yes**. Suitable habitat exists and the species is known to occur in the project vicinity. The closest CNDDB occurrence from 1988 is located approximately 3 miles north of the northern end of the project area.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect with mitigation measures.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE/SE/-	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County & extreme northern Santa Cruz County.	**Yes.** Suitable habitat may exist along project area in aquatic habitats. Records indicate the closest species occurrence is approximately 6 miles north of the project area and near Año Nuevo Point.	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** May affect, but is not likely to adversely affect. **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	FE/SE/FP	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow water, using clumps of vegetation or debris for cover. Adults utilize mammal burrows.	**No**. Species occurs in a few specific locations which are not located along the project area. There are numerous CNDDB occurrences within the County; however, they are greater than 11 miles from the southern end of project area.	**No**. Suitable habitat is not present within the project area.	**ESA:** No effect. **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Tidewater goby ***Eucyclogobius newberryi***	FE/-/SSC	Inhabits brackish waters less than 3 feet deep of major stream drainages along the California coast. Breeds in lagoons near ocean waters in coarse, unconsolidated sandy areas. Rarely found upstream in freshwater and downstream in saline waters.	**No**. Suitable habitat is not present within the project area limits, and connectivity between habitat and the project area does not exist. According to the CNDDB, the species has been documented in Laguna Creek and Baldwin Creek.	**No.** Although suitable habitat is present in the vicinity of the project area, no work would be done in areas of potential habitat or in perennial or intermittent creeks which may flow into potential habitat.	**ESA:** No effect. **CESA:** N/A **CEQA:** No effect
Townsend's big-eared bat ***Corynorhinus townsendii***	-/CT/SSC	Coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Caves, mines, and structures with suitable microclimates.	**Yes.** Suitable habitat for the species occurs in the project vicinity and the project is located within the species range. The nearest recorded occurrence is approximately 9 miles north of the northern end of the project area.	**Yes.** Though hibernacula and roosting habitat may occur near the project area, no aspects of this project would affect these habitats. The proposed action may impact this species due to construction-related activities including noise, vibration, and visual disturbances; however, they are anticipated to be minimal and short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Tricolored Blackbird ***Agelaius tricolor***	-/SC/SSC	Breeds in open waters with protected nesting substrates such as willows and cattails. Winters in areas with grasslands, agricultural fields, dairy farms, and feed lots.	**Yes**. Suitable habitat exists and the species is known to occur near the project area. There are three CNDDB recorded occurrences within 3 miles of the project area.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Western pond turtle ***Emys (Actinemys) marmorata***	-/-/SSC	Associated with ponds, lakes, rivers, streams, creeks, marshes, irrigation ditches with abundant vegetation, rocky or muddy bottoms, in woodland, forest, and grassland. Logs, rocks, cattail mats, exposed banks. 0 - 5,900 feet.	**Yes.** The project is within the mapped range for this species and potentially suitable habitat for this species occurs within the vicinity of the project area in drainages and lagoons. The closest recorded occurrence is approximately 1.5 miles southeast of the project area.	**Yes.** The proposed action may impact this species due to construction-related activities, including: erosion and sediment releases, increased presence of human activity, as well as vibrational, visual and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is not afforded any federal or state regulatory protection and will not be discussed elsewhere in this document.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant effect.
Western Snowy Plover ***Charadrius alexandrines nivosus***	FT/-/SSC	Most commonly nests on coastal beaches, in sand pits, on dune-backed beaches near creek and river mouths, and near salt pans and estuaries on flat, open areas with sparse to absent vegetation usually within 100 meters of water.	**No**. Suitable nesting habitat exists in the vicinity of project area. However, project activities are not anticipated to affect individuals or habitat.	**No.** While known areas of breeding and nesting habitat are located in the vicinity of the project area, these areas are sufficiently located far enough away. Additionally, the difference in elevation between the project and suitable habitat provides a barrier to potential project effects so that project activities are not anticipated to impact the species.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
White-tailed Kite ***Elanus leucurus***	-/-/FP	Coastal valleys and valley lowlands. Rarely found away from agricultural lands. Forages in open grasslands, meadows, farmlands, and emergent wetlands.	**Yes**. Suitable habitat exists and the species has been observed along the project area (Santa Cruz County Regional Transportation Commission, 2014). The closest recorded occurrence is a nest observed active in 2004, approximately 3 miles northeast of the project area.	**Yes.** The proposed action may impact this species and disrupt foraging behaviors due to construction-related activities, including: increased presence of human activity, as well as vibrational, visual, and noise disturbances. However, these effects are anticipated to be minimal and would be short-term in nature. This species is evaluated further in this document.	**ESA:** N/A **CESA:** May affect but the project is not anticipated to result in any take of this species. **CEQA:** Less than significant effect with mitigation measures.
Plants					

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Blasdale's bent grass *Agrostis blasdalei*	-/-/-/1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 meters above mean sea level (amsl).	**Yes**. Species reported less than 1,000 feet west of the project area. However focused botanical surveys were completed for this species and it was not found.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Vernal pool bent grass *Agrostis lacuna-vernalis*	-/-/-/1B.1	Currently only known within or around the margins of vernal pools (mima mounds), however known occurrences, and therefore habitat locations, of the species are relatively new.	**Yes.** Species was identified on top of a coastal mesa within a potential mitigation area.	**Yes.** Impacts to this species may occur as a result of the potential California red-legged from mitigation site, if the area is not avoided.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant with mitigation.
Bent-flowered fiddleneck *Amsinckia lunaris*	-/-/-/1B.2	Cismontane woodland, valley and foothill grassland. 50-500 meters amsl.	**No.** Suitable cismontane woodland habitat is not present in the project area. Closest reported occurrences are 4 miles north and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Slender silver moss *Anomobryum julaceum*	-/-/-/4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. 100-1000 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest reported occurrences are 4 miles north and are at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Coast rockcress *Arabis blepharophylla*	-/-/-/4.3	Rocky habitat in broadleafed upland forest, coastal bluff scrub, coastal prairie, & coastal scrub.	**No**. There are no verified reported occurrences within 50 miles of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Anderson's manzanita *Arctostaphylos andersonii*	-/-/-/1B.2	Broadleaved upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 60-760 meters amsl.	**No**. There is no suitable habitat present in the survey area and no manzanita species were observed during focused botanical survey. Closest recorded occurrences are 3.5 miles northeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Schreiber's manzanita *Arctostaphylos glutinosa*	-/-/-/1B.2	Closed-cone coniferous forest, chaparral. Mudstone or diatomaceous shale outcrops; often with *Pinus attenuata*. 170-685 meters amsl.	**No**. There is no suitable habitat present in the survey area and no manzanita species were observed during focused botanical survey. Closest recorded occurrences are 6 miles north and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Ohlone manzanita *Arctostaphylos ohloneana*	-/-/-/1B.1	Coastal scrub, closed cone coniferous forests. Monterey shale. 450-530 meters amsl.	**No**. There is no suitable habitat present in the survey area and no manzanita species were observed during focused botanical survey. Closest recorded occurrences are 6 miles north and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Pajaro manzanita *Arctostaphylos pajaroensis*	-/-/-/1B.1	Chaparral (sandy).	**No**. There is no suitable habitat present in the survey area and no manzanita species were observed during focused botanical survey. Closest recorded occurrences are 13 miles east and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Bonny Doon manzanita *Arctostaphylos silvicola*	-/-/-/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Only known from Zayante (inland marine) sands in Santa Cruz County. 150-520 meters amsl.	**No**. There is no suitable habitat present in the survey area and no manzanita species were observed during focused botanical survey. Closest recorded occurrences are 2 miles north at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Marsh sandwort *Arenaria paludicola*	FE/SE/-/1B.1	Boggy areas in freshwater marshes and swamps. Sandy soil. 3-170 meters amsl.	**No**. There are no suitable marshes or swamps within the project area. However, the closest recorded occurrence is less than 1,000 ft south of the eastern most end of the project area; and is a reintroduced population at Wilder Ranch State Park. There is only one known extant wild population in the U.S. at Oso Flaco Lake (156 miles south of the project area).	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Brewer's calandrinia *Calandrinia breweri*	-/-/-/4.2	sandy or loamy, disturbed sites and burns in chaparral or coastal scrub. 10-1220 meters amsl.	**Yes**. Suitable habitat is present in the project area. Closest recorded occurrence is in an adjacent quadrangle (Laurel) 5 miles to the northeast.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site, there is a low likelihood the species is present. Impacts, if any were to occur, are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Santa Cruz Mountains pussypaws *Calyptridium parryi var. hesseae*	-/-/-/1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 305-1530 meters amsl.	**No**. There is no suitable habitat for this species. The project area is outside to known elevational range of the species. The closest recorded occurrence is 8 miles northeast of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Swamp harebell *Campanula californica*	-/-/-/1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marsh, north coast coniferous forest. Uncommon where it occurs. 1-405 meters amsl.	**No**. No suitable marsh habitat is present in the project area. The only recorded occurrence in a 50 mile radius is historic (1944) and is located 6 miles northeast in a bog, at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Bristly sedge *Carex comosa*	-/-/-/2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. 5-1620 meters amsl.	**Yes**. Marginal suitable wetland habitat is present in the project area; however the closest recorded occurrence is 12 miles east of the project area.	**No.** Due to a history of significant disturbance throughout the wetlands and the overall site, and the distance from the closest recorded occurrence, bristly sedge is not anticipated to occur in the project area and no impacts are anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Deceiving sedge *Carex saliniformis*	-/-/-/1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt). Mesic sites. 3-230 meters amsl.	**Yes**. Marginal suitable wetland habitat is present in the project area, however closest recorded occurrence is historic (1944), presumed extirpated, and 6 miles east of the project area.	**No.** Due to a history of significant disturbance throughout the wetlands and the overall site, as well as the historic record of the species, deceiving sedge is not anticipated to occur in the project area and no impacts are anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Johnny-nip *Castilleja ambigua var. ambigua*	-/-/-/4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margins. 0-435 meters amsl.	**Yes**. Suitable habitat is present in the project area, closest recorded occurrence is at the Moore Creek Preserve east of Wilder Ranch State Park.	**Yes**. The proposed action may impact this species due to ground disturbing activities coastal scrub and coastal bluff scrub habitat. However, due to a history of disturbance at the site, and the minimal amount of coastal scrub habitat, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minimal and will not jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Ben Lomond spineflower *Chorizanthe pungens var. hartwegiana*	FE/-/-/1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 105-475 meters amsl.	**No**. Suitable coniferous forest is not present in the project area. The closest recorded occurrence is 2 miles southeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** No Effect **CESA:** N/A **CEQA:** No effect.
Scotts Valley spineflower *Chorizanthe robusta var. hartwegii*	FE/-/-/1B.1	Meadows, valley and foothill grassland. In grasslands with mudstone and sandstone outcrops. 105-245 meters amsl.	**No**. Suitable grassland habitat is not present in the project area. The closest recorded occurrence is 6 miles northeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** No Effect **CESA:** N/A **CEQA:** No effect.
Robust spineflower *Chorizanthe robusta var. robusta*	FE/-/-/1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 9-245 meters amsl.	**Yes**. Marginal suitable coastal scrub habitat is present in the project area. However, most populations of the species are extirpated and it is now known from only eight sites. The closest recorded occurrence is within the Pogonip Open Space Preserve 3 miles northeast. All occurrences reported in the quadrangle are at elevations higher than the project area. No Chorizanthe species were observed during *Agrostis blasdalei* surveys.	**No**. Due to a history of significant disturbance at the site, and the minimal amount of habitat available within the project area, robust spineflower is not anticipated to occur in the project area. No impacts are expected.	**ESA:** No effect. **CESA:** N/A **CEQA:** No effect.
Franciscan thistle *Cirsium andrewsii*	-/-/-/1B.2	Coastal bluff scrub, broadleaved upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0-150 meters amsl.	**Yes**. Suitable coastal bluff scrub and coastal scrub habitat is present in the project area. However, the closest recorded occurrence (approximately 10 miles northwest) is historic and unverified.	**No**. Due to there being no current occurrences of this species recorded within 40 miles of the project area, no impacts are anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
San Francisco collinsia *Collinsia multicolor*	-/-/-/1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 30-250 meters amsl.	**No**. Suitable habitat (soils) is not present within the project area. There are several reported occurrences 3-7 mile northwest of the project area; however they are all on the eastern side of highway one.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Clustered lady's-slipper *Cypripedium fasciculatum*	-/-/-/4.2	Usually serpentinite seeps and streambanks in lower montane coniferous forest or north coast coniferous forest. 100 - 2435 meters amsl.	**No**. Suitable serpentinite habitat is not present in the project area. The exact location of the closest recorded occurrence is unknown; however it is located in the adjacent Laurel quadrangle at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Mountain lady's-slipper *Cypripedium montanum*	-/-/-/4.2	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, or north coast coniferous forest. 185 - 2225 meters amsl.	**No**. Suitable woodland habitat is not present in the project area. The exact location of the closest recorded occurrence is unknown; however it is located in the adjacent quadrangles at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Tear drop moss *Dacryophyllum falcifolium*	-/-/-/1B.3	North Coast coniferous forest. Limestone substrates and rock outcrops. 50-275 meters amsl.	No. Suitable coniferous forest is not present in the project area. Closest recorded occurrence is 2.5 miles northeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
California bottle-brush grass *Elymus californicus*	-/-/-/4.3	Broadleafed upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. 15 - 470 meters amsl.	**Yes**. Marginal woodland habitat is present in the project area. The closest current record is 4 miles north of the project area near Swanton. However, there is no undisturbed riparian woodland habitat in the project area and therefore the potential to support this species is very low.	**Yes**. The proposed action may impact this species due to ground disturbing activities in woodland habitat. However, due to a history of disturbance at the site and the minimal amount of potential habitat, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minor and are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Ben Lomond buckwheat *Eriogonum nudum var. decurrens*	-/-/-/1B.1	Chaparral, cismontane woodland, lower montane coniferous forest. Ponderosa pine sandhills in Santa Cruz County. 50-800 meters amsl.	No. Suitable habitat is not present in the project area. The closest recorded occurrences are 6 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Sand-loving wallflower *Erysimum ammophilum*	-/-/-/1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 0-60 meters amsl.	**Yes**. Suitable coastal scrub habitat is present in the project area. However, the closest verified occurrences are along Monterey Bay 14 miles southwest of the project area.	**No**. Due to the distance of the closest verified occurrence, sand-loving wallflower is not anticipated to be in the project area and no impacts are anticipated..	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Menzies' wallflower *Erysimum menziesii*	FE/SE/-/1B.1	Coastal dunes, coastal bluff scrub (Marina dunes at Monterey Bay and Monterey Peninsula)	**No**. Suitable habitat is not present. The species is only known to occur in two locations 20 plus miles south and southwest of the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Santa Cruz wallflower *Erysimum teretifolium*	FE/SE/-/1B.1	Lower montane coniferous forest, chaparral. Inland marine sands (Zayante coarse sand). 180-515 meters amsl.	**No**. Suitable habitat is not present. Closest recorded occurrences are 3 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Minute pocket moss *Fissidens pauperculus*	-/-/-/1B.2	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10-1024 meters amsl.	**No**. Suitable habitat is not present. Closest recorded occurrences are 4 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Stinkbells *Fritillaria agrestis*	-/-/-/4.2	Cismontane woodland, chaparral, valley and foothill grassland. Sometimes on serpentine; mostly found in nonnative grassland or in grassy openings in clay soil. 10-1555 meters amsl.	**No**. Suitable habitat is not present. Closest recorded occurrence is 10 miles northwest of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
San Francisco gumplant *Grindelia hirsutula (var. maritima)*	-/-/-/3.2	Sandy or serpentinite sites in coastal bluff scrub, coastal scrub, or valley and foothill grassland. 15-400 meters amsl.	**Yes**. Suitable coastal bluff scrub and coastal scrub habitat is present. However variety is no longer recognized in the current CA flora. Recognized name is *Grindelia hirsutula* and the species has no special-status status.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Santa Cruz cypress *Hesperocyparis abramsiana var. abramsiana*	FT/FE/-/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Restricted to the Santa Cruz Mountains, on sandstone & granitic-derived soils; often with *Pinus attenuate* and redwoods. 280-800 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrence is 3 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Loma Prieta hoita *Hoita strobilina*	-/-/-/1B.1	Serpentinite, mesic sites in chaparral, cismontane woodland, or riparian woodland. 30-860 meters amsl.	**No.** Suitable habitat is not present in the project area. Closest recorded occurrence is 16 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Santa Cruz tarplant *Holocarpha macradenia*	FT/FE/-/1B.1	Coastal terrace prairie habitat. Light, sandy soil or sandy clay; often with nonnatives. 10-220 meters amsl.	**No**. Suitable coastal terrace prairie habitat is not present in the project area. All known populations of the species are east of the project area. The closest recorded occurrence is 4 miles northeast.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Kellogg's horkelia *Horkelia cuneata var. sericea*	-/-/-/1B.1	Sandy or gravelly openings in closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; 10-200 meters amsl.	**Yes.** Suitable coastal scrub habitat is present in the project area. Closest recorded occurrences are 6 miles northwest and northeast of the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimum amount of potential habitat, there is a very low likelihood the species is present. Impacts, if any were to occur, would be minimal and are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Point Reyes horkelia *Horkelia marinensis*	-/-/-/1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 meters amsl.	**Yes.** Marginal suitable coastal scrub habitat is present in the project area. Closest recorded occurrence is 1 mile northeast of the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Smooth lessingia *Lessingia micradenia var. glabrata*	-/-/-/1B.2	Serpentinite, often roadsides in chaparral or cismontane woodland. 120-420 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrences are 20 miles northeast of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Arcuate bush-mallow *Malacothamnus fasciculatus* *(M. arcuatus)*	-/-/-/1B.2	Chaparral, cismontane woodland. Gravelly alluvium. 1-735 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrences are 16 miles northeast & north of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Mt. Diablo cottonweed *Micropus amphibolus*	-/-/-/3.2	Rocky sites in broadleafed upland forest, chaparral, cismontane woodland, or valley and foothill grassland. 45-825 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded locations are within Wilder Ranch State Park at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Marsh microseris *Microseris paludosa*	-/-/-/1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 meters amsl.	**Yes**. Marginal suitable coastal scrub habitat is present in the project area. However, closest recorded occurrences are 3 miles north and at higher elevations than the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minimal and are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Elongate copper moss *Mielichhoferia elongata*	-/-/-/4.3	Cismontane woodland. Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally enriched with heavy metals (e.g. copper). 500-1300 meters amsl.	**No**. Suitable habitat is not present in the project area. However, closest recorded occurrence is 1 mile northwest of the northern edge of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Santa Cruz County monkeyflower *Mimulus rattanii ssp. decurtatus*	-/-/-/4.2	Gravelly margins in chaparral or lower montane coniferous forest. 90-1220 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrence is 6 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Northern curly-leaved monardella *Monardella sinuata ssp. nigrescens*	-/-/-/1B.2	Sandy soils in coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. 0-300 meters amsl.	**Yes**. Suitable coastal scrub habitat is present in the project area. However, closest recorded occurrences are 7 miles northeast and at higher elevations than the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minimal and are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Woodland woollythreads *Monolopia gracilens*	-/-/-/1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleafed upland forest, north coast coniferous forest. Open grassy sites; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 100-1200 meters amsl.	**No**. Suitable habitat is not present within the project area. Closest current record is 8 miles northeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Dudley's lousewort *Pedicularis dudleyi*	-/SR/-/1B.2	Chaparral, north coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 60-900 meters amsl.	**No**. Suitable habitat is not present within the project area. The closest extant occurrence is 16 miles north and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** No effect. **CEQA:** No effect.
Santa Cruz Mountains beardtongue *Penstemon rattanii var. kleei*	-/-/-/1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 400-1100 meters amsl.	**No**. Suitable habitat is not present within the project area. The closest recorded occurrence is 4 miles northeast and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
White-rayed pentachaeta *Pentachaeta bellidiflora*	FE/FE/-/1B.1	Valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35-610 meters amsl.	**No**. Suitable habitat is not present within the project area. There are no occurrences recorded post 1955 within 40 miles of the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.
Monterey pine *Pinus radiata*	-/-/-/1B.1	Closed-cone coniferous forest, cismontane woodland. Three primary stands are native to California. Dry bluffs and slopes. 60-125 meters amsl.	**No**. The project area is not located within one of the three native stands (Año Nuevo, Cambria, or Monterey Peninsula). Elsewhere, the species is treated as an invasive species. Año Nuevo is located approximately 3 miles northwest of the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
White-flowered rein orchid *Piperia candida*	-/-/-/1B.2	North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 45-1615 meters amsl.	**No**. Suitable habitat is not present within the project area. The closest recorded occurrence is 9 miles north and at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Choris' popcornflower *Plagiobothrys chorisianus var. chorisianus*	-/-/-/1B.2	Mesic sites in chaparral, coastal scrub, coastal prairie. 15-160 meters amsl.	**Yes.** Marginal suitable coastal scrub habitat is present in the project area. The closest recorded occurrence is 5 miles northwest of the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, are not anticipated to jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
San Francisco popcornflower *Plagiobothrys diffusus*	-/SE/-/1B.1	Valley and foothill grassland, coastal prairie. Historically from grassy slopes with marine influence. 45-360 meters amsl.	**No**. Suitable grassland or prairie habitat is not present. However, closest recorded occurrences are 1 mile northeast of the eastern end of the project area, at a higher elevation than the project area itself.	**No.** None anticipated.	**ESA:** N/A **CESA:** No effect. **CEQA:** No effect.
Scotts Valley polygonum *Polygonum hickmanii*	FE/SE/-/1B.1	Valley and foothill grassland. Purisima sandstone or mudstone with a thin soil layer; vernally moist due to runoff. 210-230 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrences are 9 miles northeast and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** No effect. **CESA:** No effect. **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Lobb's aquatic buttercup *Ranunculus lobbii*	-/-/-/4.2	Mesic sites in cismontane woodland, north coast coniferous forest, valley and foothill grassland, or vernal pools. 15-470 meters amsl.	**No**. Suitable habitat is not present in the project area. The closest recorded occurrence is historic (1976) from the hills of Wilder Ranch State Park at a higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Pine rose *Rosa pinetorum*	-/-/-/1B.2	Closed-cone coniferous forest, cismontane woodland. 5-1090 meters amsl.	**No**. Suitable habitat is not present In the project area. The closest extant population is recorded 23 miles south on the Monterey Peninsula.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Hoffmann's sanicle *Sanicula hoffmannii*	-/-/-/4.3	serpentinite or clay in broadleafed upland forest, coastal bluff scrub, chaparral, cismontane woodland, coastal scrub, or lower montane coniferous forest. 30-300 meters amsl.	**No**. Suitable habitat is not present In the project area. The closest recorded populations are approximately 3 miles north of Davenport.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Chaparral ragwort *Senecio aphanactis*	-/-/-/2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 meters amsl.	**No**. Suitable habitat is not present in the project area. The only recorded occurrence of the species within the vicinity is at the Bonny Doon Ecological Reserve 3 miles north and at a much higher elevation than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Maple-leaved checkerbloom *Sidalcea malachroides*	-/-/-/4.2	Broadleafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest. Woodlands and clearings near coast; often in disturbed areas. 0-730 meters amsl.	**Yes.** There is marginal suitable coastal scrub habitat present in the project area. However, the closest reported occurrences are 12 miles east and at higher elevations than the project area.	**No**. Due to the distance of the closest verified occurrence and the history of significant disturbance at the site, maple-leaved checkerbloom is not expected to be in the project area and no impacts are anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
San Francisco campion *Silene verecunda ssp. verecunda*	-/-/-/1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie. Often on mudstone or shale; one site on serpentine. 30-645 meters amsl.	**Yes**. Marginal suitable coastal scrub habitat is present in the project area. The closest recorded occurrence is 5 miles northwest of the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minor and will not jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Santa Cruz microseris *Stebbinsoseris decipiens*	-/-/-/1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 10-500 meters amsl.	**Yes**. Marginal suitable coastal scrub habitat is present in the project area. The closest recorded occurrence is 5 miles northwest of the project area.	**Yes**. The proposed action may impact this species due to ground disturbing activities in coastal scrub habitat. However, due to a history of disturbance at the site and the minimal amount of coastal scrub habitat within the project area, there is a very low likelihood the species is present. Impacts, if any were to occur, will be minor and will not jeopardize the continued existence of the species.	**ESA:** N/A **CESA:** N/A **CEQA:** Less than significant.
Slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	-/-/-/2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 300-2150 meters amsl.	**No**. Suitable habitat is not present in the project area. All the recorded occurrences are historic and labeled as “needs work”.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
Santa Cruz clover *Trifolium buckwestiorum*	-/-/-/1B.1	Moist grassland and gravelly margins in coastal prairie, broadleafed upland forest, cismontane woodland. 105-610 meters amsl.	**No**. Suitable habitat is not present in the project area. Closest recorded occurrences are 4 miles east and at higher elevations than the project area.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Coastal Brackish Marsh	-/-/S/-	Marsh & swamp wetlands.	**No**. Coastal brackish marsh habitat is not present in the project area. Closest recorded occurrence is 7 miles northwest.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Maritime Coast Range Ponderosa Pine Forest	-/-/S/-	Lower montane coniferous forest.	**No**. Maritime coast range ponderosa pine forest is not present in the project area. Closest recorded occurrence is 3 miles northeast.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Monterey Pine Forest	-/-/S/-	Closed-cone coniferous forest.	**No**. Monterey pine forest is not present in the project area. Closest recorded occurrence is 5 miles northwest.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Northern Coastal Salt Marsh	-/-/S/-	Marsh & swamp wetlands.	**No**. Northern coastal salt marsh is not present in the project area. Closest recorded occurrence is 2.5 miles northwest.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Northern Interior Cypress Forest	-/-/S/-	Closed-cone coniferous forest.	**No**. Northern interior cypress forest is not present in the project area. Closest recorded occurrence is 3 miles northwest.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.
Northern Maritime Chaparral	-/-/S/-	Chaparral.	**No.** Northern maritime chaparral is not present in the project area. Closest recorded occurrence is 3 miles northeast.	**No.** None anticipated.	**ESA:** N/A **CESA:** N/A **CEQA:** No effect.

Species Name	Status Federal[1]/ State[2]/ CDFW[3]/ CNPS[4]	General Habitat Association	Habitat Present/ Closest Occurrence to Project Area[5]	Potential Project Impacts	Finding
STATUS CODES: **1: Federal Status** FE – Federally listed as endangered FT – Federally listed as threatened FC– Federal candidate for listing FPE– Federally proposed as endangered FPT– Federally proposed as threatened **2: State Status** SE – State listed as endangered ST – State listed as threatened SR – State listed as rare SC – State Candidate CT – Candidate threatened		**3: CDFW Status** FP – Fully Protected SSC – Species of Special Concern WL – Watch List **4: CNPS Status** 1A – Plants presumed extinct in California 1B – Plants rare, threatened, or endangered in California and elsewhere 2 – Plants rare, threatened, or endangered in California, but more common elsewhere 3 – Plants about which we need more information – a review list 4 – Watch list, limited distribution		**CNPS threat code extensions** .1 – Seriously endangered in California. .2 – Fairly endangered in California. .3 – Not very endangered in California. **5: Occurrence Data** Closest occurrence data obtained from (CDFW, 2016a) or through (CNPS, 2016). Occurrence data was not available for all of the species contained in this report.	

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APPENDIX F
Agency Correspondence

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U.S. Department of Transportation
Federal Highway Administration

Central Federal Lands Highway Division

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February 10, 2020

In Reply Refer To:
HFPM-16

Ms. Lisa Van Atta; Attention: Mandy Ingham
Assistant Regional Administrator
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
777 Sonoma Avenue, Suite 325
Santa Rosa, CA 95404

Re: Initiation of Informal Section 7 Consultation and Essential Fish Habitat (EFH) Assessment for Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1) Santa Cruz County, California

Dear Ms. Ingham:

The Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), and the Santa Cruz County Regional Transportation Commission (SCCRTC) are proposing the construction of a segment of the proposed Monterey Bay Sanctuary Scenic Trail (MBSST), in Santa Cruz County, California (CA). The proposed project consists of construction of 7.4 miles of new multi-use trail for pedestrians and bicyclists north of Santa Cruz, CA that would run parallel to an existing rail line. The proposed trail would begin at Davenport, CA and proceed south to its terminus at the Wilder Ranch State Park parking area. In addition, the proposed project would include improvements to the Yellowbank Beach Parking lot and the Davenport Parking lots. Pedestrian access to the trail from a third parking lot, the Bonny Doon parking area would also be improved (see Figure 1).

The enclosed biological assessment (BA) addresses potential project impacts on federally listed threatened and endangered species, including the endangered Central California Coast Coho Salmon and Central California Coast Steelhead.
The BA concludes the following:

- Construction activities could potentially increase sediment and chemical runoff in the action area in the short term. However, due to the existing, well-established vegetative buffer, the distance of the waterways that provide habitat, and project avoidance and minimization measures, the project is anticipated to result in insignificant and discountable effects to the CCC coho salmon and the CCC steelhead. Therefore, the proposed project may affect, but is not likely to adversely affect the CCC coho salmon and the CCC steelhead.
- While the proposed project could result in temporary impacts to water quality adherence to the project avoidance and minimization measures would minimize these effects. Therefore, the proposed project may affect, but is not likely to adversely affect (diminish, destroy, nor adversely modify) critical habitat for the CCC coho salmon and the CCC steelhead. Additionally, EFH within the action area may experience short-term effects although the project is not anticipated to modify or degrade any EFH components.

To comply with Section 7(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA), FHWA is requesting informal consultation with National Marine Fisheries Service on the CCC coho salmon and CCC steelhead.

In parallel, FHWA is also requesting consultation with U.S. Fish and Wildlife Service for the non marine and non anadramous specis that fall under their purview through a separate Biological Assessment. As detailed in that BA, these include evaluation of the California Red Legged Frog (*Rana drayfonii*) and the San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*).

The enclosed essential fish habitat (EFH) assessment has been prepared to evaluate the potential effects of the proposed MBSST project on Essential Fish Habitat (EFH) in the project area, in accordance with Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). No activities would occur within EFH under the proposed action; however, indirect impacts may occur to EFH from increased siltation, turbidity, or release of pollutants associated with construction activities in, over, or adjacent to the streams. Streams in the project area have relatively continuous surface connections to the pacific ocean. Based on the project design and implementation of BMPs, the project may result in temporary minimal impacts associated with the trail construction activities. The assessment concludes that the EFH within the action area may experience short-term effects although the project is not anticipated to modify or degrade any EFH components. Any effects would be most likely contained only within the stream and occur only over a short duration with no long-term effects. In compliance with the consultation requirements under the MSA, FHWA is seeking your concurrence with this determination.

If you require further information or have questions, please contact Timberly Belish, Environmental Protection Specialist, by email at timberley.belish@dot.gov or by phone at (720) 963-3683. We appreciate your assistance with this project.

Sincerely,

Wendy Longley
Project Manager

Enclosure:
Biological Assessment and Essential Fish Habitat Assessment for the Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1) Santa Cruz County, California

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

March 11, 2020 **Refer to NMFS No:** WCRO-2020-00224

Wendy Longley
Project Manager
12300 West Dakota Avenue, Suite 380
Lakewood, Colorado 80228

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Monterey Bay Sanctuary Scenic Trail (MBSST) in Santa Cruz, California

Dear Ms. Longley:

On February 10, 2020, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), and the Santa Cruz County Regional Transportation Commission's (RTC) construction of a segment of the proposed Monterey Bay Sanctuary Scenic Trail (MBSST), in Santa Cruz County, California is not likely to adversely affect (NLAA) species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within two weeks at NMFS' Environmental Consultation Organizer (ECO) at this link: https://www.fisheries.noaa.gov/resource/tool-app/environmental-consultation-organizer-eco. A complete record of this consultation is on file at the NMFS North-Central California Coast Office in Santa Rosa, California.

Consultation History

FHWA-CFLHD requested technical assistance with NMFS by phone on July 14, 2016, to discuss the threatened or endangered species that may occur in the project vicinity of a trail segment of the

MBSST. FHWA-CFLHD requested informal consultation with NMFS by email on February 10, 2020. On February 21, 2020, NMFS sent a request for additional information to FHWA-CFLHD by email. On February 21, 2020, FHWA-CFLHD sent an email with the additional information requested, which NMFS reviewed for completeness on February 24, 2020. On February 24, 2020, NMFS requested clarification on culvert construction activities and FHWA-CFLHD responded by email on February 25, 2020. On February 25, 2020, NMFS initiated consultation.

Proposed Action and Action Area

The North Coast Rail Trail Project (Project), which is a segment of the MBSST, would construct a new multi-use trail for pedestrians and bicyclists on the coastal side of the existing railroad tracks in Santa Cruz County, California. The Project is located in unincorporated northern Santa Cruz County along the Pacific Ocean coastline. The Project includes a paved path with striping, parallel-unpaved path and/or shoulders, fencing, and parking improvements with trail connections at three locations along the alignment. The trail would extend approximately 7.5 miles parallel to the rail line from the Wilder Ranch State Park parking lot to the Davenport Beach parking area. In addition, the Project would include improvements to the Panther/Yellowbank Beach Parking lot, the Davenport Parking lot and the Bonny Doon parking lot (Figure 1).

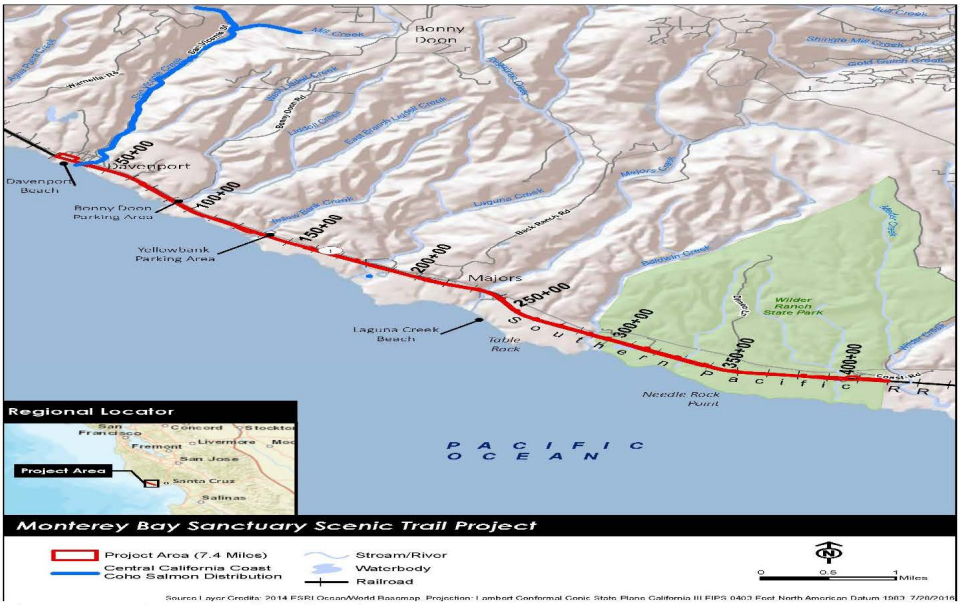

Figure 1. North Coast Rail Trail Project Source: MBSST BA, FHWA-CFLHD 2020

The Project would be constructed predominantly on undeveloped, publicly owned land, with the alignment within or adjacent to the RTC-owned rail corridor and through land owned by the California Department of Parks and Recreation. The entire alignment and three parking areas are in the Coastal Zone and are therefore subject to a California Coastal Commission federal consistency determination under the Coastal Zone Management Act.

Construction activities in this Project include:

Trail Construction. The Project consists of developing an approximately 7.5 mile multi-use trail that would include an asphalt paved path with unpaved shoulders composed of compacted gravel or decomposed granite. In addition, three parking lots along Highway 1 would be improved providing visitor amenities and ADA access, where feasible, to the trail. In some areas where the railroad tracks extend through a rail cut with slopes on either side, the trail would follow the higher grade on the coastal side to minimize cutting into the slope and/or minimize impacts to sensitive resources. These areas, as well as other portions of the trail, would be located on existing farm roads.

The typical trail cross-section would be 16-feet-wide and include:

- 12-foot-wide paved path with striping to separate north and south bound users;
- 2-foot-wide unpaved shoulder on each side;
- safety fencing between the trail and tracks in locations where the rail and trail are on the same grade and there is no vegetated buffer; and
- fencing in select locations to minimize trespass into active agricultural fields.

To allow continued access for farm equipment in the southern portion of the project, the ocean-side shoulder of the trail will be widened to 19 feet. Preliminary design includes approximately 0.6 miles of widened shoulder in five separate locations.

Bank Stabilization. There are several locations where slope stabilization measures (e.g., a reinforced soil slope or other retaining structure) will be needed. If the existing railway bench is not wide enough to support the trail, it may be widened by cutting or filling the existing slope. Depending on the steepness of the existing slopes and any sensitive resources in the area, natural or reinforced soil fills or other retaining structures will be used in these locations. Where retaining structures are needed, walls may be constructed from: soldier piles with timber lagging, mechanically stabilized earth, or segmental precast concrete wall systems with a façade with architectural treatments. To support the trail widening in steep slopes, reinforced soil slope (RSS) or wire mesh baskets would be used. Planting of native vegetation will occur where walls or embankments can support it. No bank stabilization would occur below the ordinary high water mark of perennial and intermittent streams designated as critical habitat for Central California Coast (CCC) steelhead or Central California Coast (CCC) coho salmon.

Parking Lot Improvements. Trail connections from and improvements to Davenport Beach, Bonny Doon Beach and Panther/Yellowbank Beach parking areas would occur as part of the Project. Paving and striping parking spaces at the currently unpaved Davenport Beach Lot and Panther/Yellowbank Beach Lot are included. Improvements in these parking areas would also include restroom facilities, trash/recycling containers, bike racks, benches and an Americans with Disabilities Act (ADA) accessible path to the trail. The Bonny Doon Beach parking area is paved and the Project would include minor expansion of the paved area to accommodate bike racks and trash/recycling containers. There would be no ADA-compliant access to the path in this location.

Trail Crossings. There are numerous crossing locations over the rail alignment along the 7.5-mile-long rail corridor, including 16 that are formal paved or unpaved roads for farm or personal vehicles.

Additionally, there are numerous informal trails used by pedestrian/bicyclists to access the coast and informal roads used by farmers. The Project would establish or retain a total of 17 formal crossings, close 4 existing formal crossings and eliminate 6 informal crossings. The proposed new formal crossings include those located at the three parking lots previously discussed to access the Project trail.

Culvert Installation or Replacement. There are nine locations where the trail would cross an identified drainage. Including several streams that flow underneath Highway 1 and the Project sites through a bridge or culvert. Dense vegetation and/or several feet of elevation separate the stream banks from construction activities. There are several ditches along the existing rail bench where stormwater would surface flow from the new paved trail to the adjacent unpaved pervious areas. To improve drainage along the proposed trail, approximately 30 culverts ranging in size from 18-inch-diameter to 30-inch-diameter will be installed or replaced at locations along or perpendicular to the trail alignment to allow stormwater to pass beneath the trail bed.

Fencing and Gates. The Project would include installation of fencing between the trail and agricultural lands at some locations where a natural barrier does not exist to prevent trail users from entering agricultural land. In areas where a physical barrier exists (i.e., dense vegetation) fencing would not be installed. Where steep slopes are adjacent to the trail, fencing may be installed for safety purposes. Fencing may be installed on the inland side of the trail to separate trail users and the railroad. The fencing will be constructed using posts (4 feet 6 inches in height), and multiple (5-7) smooth wire strands. This type of fence will accommodate wildlife passage.

Trail Amenities. Amenities in the form of benches, bike racks, informational and interpretative signs, restrooms and trash/recycling containers will be installed along the trail. Most of the amenities would be located in the three parking lots, as described above. Rest areas will be placed approximately ½ mile to 1 mile apart depending on terrain and beach access. No restrooms will be located on the trail. There will be no lighting along the trail or at the parking lots. The restroom facilities in the Davenport Beach lot and the Panther/Yellowbank Beach lot will have low-level lighting. There will be no landscaping along the trail or in the parking lots. Areas disturbed by construction activities will be revegetated with native species.

Construction and Equipment Staging and Stockpile Area. Construction and equipment staging and stockpiling will occur on existing disturbed areas within the construction corridor. The existing dirt trail along the rail line may also be used for staging. In general, construction activities for the Project include excavation of material sources, cleaning and grubbing, grading, placement of crushed aggregate base and paved surface, revegetation, installation of signs, and related safety features. Construction activity would generally be within the 16-foot-wide trail alignment, but there could be temporary disturbance within 10 feet of either side of the alignment. In environmentally sensitive areas, construction activities outside the trail corridor will be minimized to the extent feasible.

Utility Relocations and Installations. There are existing gas, electric, telecommunication, water and sanitary sewer utilities in some locations within the rail corridor and in the project vicinity. Project construction may require relocation of some utilities. Furthermore, construction of new utility facilities to service toilets at the Davenport parking area will occur. The CFLHD and the RTC will coordinate with utility providers regarding relocation and final design.

Timing and Duration. Final Project design is likely to be complete in 2020 and construction could begin in 2021. The estimated construction length is approximately 12 months.

Project Avoidance and Minimization Measures (AMMs).

- No in-water work occurs within intermittent or perennial streams.
- Work adjacent to streams shall not occur between November 1 and May 1, unless otherwise approved by NMFS.
- Heavy equipment use in saturated soils will be avoided where and when possible.
- All construction equipment shall show no signs of fuel or oil leaks.
- No construction staging will occur in wetland or riparian habitats.
- Areas disturbed by construction activities will be top-soiled as feasible. Disturbed areas will receive seeding with a locally native mix and mulched, or an appropriate erosion control blanket.
- Measures will be taken to prevent and contain the discharge of chemicals and hazardous materials and trained personnel will be on site to respond immediately as needed.
- Construction shall be limited to daylight hours.
- Equipment washout and fueling areas will be located a minimum of 100 feet from waters, wetlands, or sensitive resources as identified by a qualified biologist. The washout areas will fully contain polluted water and materials for subsequent removal from site.
- Several Best Management Practices (BMPs) on spill prevention and erosion and sediment control will follow the FHWA standard specifications for construction of roads and bridges on Federal Highway Projects as applicable to trail construction

For a complete list of AMMs please refer to the BA (FHWA-CFLHD, 2020) prepared for this Project.

We considered whether the proposed action would cause any other activities and determined that it would cause the following activities. The Project is a segment of the MBSST trail and it is reasonably certain that an extension to this segment will occur to complete the trail alignment. However, this trail segment known as the North Coast Rail Trail, is undergoing a separate consultation process as plans and funding are available now. It is likely that future consultations will be requested for other segments of the trail as funding becomes available to design and build those segments. Therefore, each trail segment beyond this Project will be subject to similar regulatory review and permitting unique to its action area. If permits or funds do not become available for future trail segments to complete the MBSST, this Project will still have independent utility as a recreation trail.

Background and Action Agency's Effects Determination

The FHWA-CFLD determined that the proposed action may affect, but is not likely to adversely affect listed fish species and their critical habitat. This is based on the location and timing of the proposed work, and the effectiveness of the BMPs to prevent and avoid impacts.

Available information indicates the following listed species (Evolutionarily Significant Units [ESU]) or (Distinct Population Segments [DPS]) under the jurisdiction of NMFS may be affected by the proposed project:

Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*) **DPS**
Threatened (71 FR 834; January 5, 2006)
Critical habitat (70 FR 52488; September 2, 2005);
Central California Coast (CCC) coho salmon (*O. kisutch*) **ESU**
Endangered (70 FR 37160, June 28, 2005)
Critical habitat (64 FR 24049; May 5, 1999).

The life history of steelhead is summarized by NMFS (1996; 2016). The life history of coho salmon in California is summarized by NMFS (1995; 2016a). Both species are anadromous salmonids, spending some time in both freshwater and saltwater. In California coastal streams, adult steelhead migration occurs between December and April, peaking in March and April, while smolt outmigration occurs between January and June, peaking in March through May (Fukushima and Lesh 1998). Adult coho salmon migration in California occurs between November and February, and smolt outmigration occurs between March and June, peaking March through May (Fukushima and Lesh 1998). Based on the AMMs, only juveniles are likely to be present in the action area during near water construction activities (May 1-Oct 31). However, because no in-water work will occur during this project, direct effects to juvenile salmonids are not expected.

Critical habitat for CCC steelhead in the action area includes San Vicente Creek, Liddell Creek, Laguna Creek, Majors Creek, and Baldwin Creek. Critical habitat for CCC coho salmon within the action area includes any accessible reaches of all rivers (including estuarine areas and tributaries). CCC coho salmon have been identified in San Vicente Creek and Laguna Creek (Calfish, 2012). The essential features and/or physical and biological features (PBFs) of critical habitat essential for the conservation of CCC steelhead and CCC coho salmon are those sites and habitat components that support freshwater migration corridors and are free of obstruction and excessive predation. The PBFs also include water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.

Regarding EFH, the FHWA-CFLHD has determined that the proposed action may adversely affect EFH. The Project action area is located within an area identified as EFH for various life stages of fish species managed under the Pacific Coast Salmon Fishery Management Plan and the Pacific Coast Groundfish Fishery Management Plan. This determination is based on temporary impacts to water quality and habitat. Therefore, the FHWA-CFLHD requests initiation of EFH consultation pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(b).

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). In our analysis, which describes the effects of the proposed action, we considered 50 CFR

402.17(a) and (b). When evaluating whether the proposed action is not likely to adversely affect listed species or critical habitat, NMFS considers whether the effects are expected to be completely beneficial, insignificant, or discountable. Completely beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

NMFS has evaluated the proposed project for potential adverse effects to ESA-listed salmonids and their designated critical habitat. The effects of the proposed actions are reasonably likely to include: 1) temporary and minor increases in turbidity; 2) potential for construction debris and materials to contaminate streams; and 3) temporary reductions in riparian vegetation.

Temporary and Minor Increases in Turbidity

Construction activities at Project sites may result in disturbance of sediment through equipment access, and construction activities related to trail construction, bank stabilization and culvert repair or replacement. Mobilization of disturbed soils through wind and/or rain events following construction are possible. Instream and near-stream construction activities have been shown to result in temporary increases in turbidity (reviewed in Furniss et al. 1991, Reeves et al. 1991, Spence et al. 1996). Increases in sediment may affect fish in a variety of ways. High concentrations of suspended sediment can disrupt normal feeding behavior and efficiency (Bjornn et al. 1977, Berg and Northcote 1985) and reduce growth rates. Even small pulses of turbid water can cause salmonids to disperse form established territories (Waters 1995), which can displace fish into less suitable habitat and/or increase competition and predation, decreasing survival as a result.

The action area includes adjacent areas 300 feet down gradient of the active work and staging sites to account for potential indirect, water quality effects resulting from construction activities. NMFS anticipates these activities may affect water quality and critical habitat in the action area in the form of small, short-term increases in turbidity during higher flow events during the first winter storms post-construction. All construction activities will occur on terrestrial land buffered from nearby streams that flow under the trail alignment through bridges or culverts. Several feet of elevation and dense vegetation separate the trail alignment and intermittent or perennial streams. There will be no work below the OHWM and no construction activities will take place adjacent to streams between November 1 and May 1 as an additional precaution to avoid impacts to adult and juvenile migration. There are no known spawning grounds in the action area so no risk of sediment deposition that could harm redds or alevins. To minimize mobilization of sediment, erosion control AMMs will be used. Based on the distance between construction activities and critical habitat, the work window, and the AMMs implemented, NMFS expects turbidity effects will be insignificant to ESA-listed salmonids and critical habitat.

Potential Release of Construction Debris or Materials into Streams

Construction operations in, over, and near surface water have the potential to release debris, hydrocarbons, concrete, and similar contaminants into surface waters. Potential construction debris that could result from a project of this type include sediment, asphalt, gravel and construction chemicals. If introduced into the water, this debris could impair water quality by altering the pH, reducing oxygen concentrations, or by introducing toxic materials to the aquatic habitat. These effects have the potential to temporarily degrade habitat and harm exposed fish. However, because

the Project incorporates AMMs and best management practices (BMPs) to address spills and prevent the introduction of materials and debris into streams, the work will done in upland areas, and there is considerable distance and dense vegetation between the activities and the streams, the potential for the Project to degrade water quality and harm ESA-listed salmonids and their critical habitat is extremely unlikely, and therefore discountable.

Temporary Reductions in Riparian Vegetation

Construction of the multi-use trail and associated improvements would result in riparian vegetation removal. Riparian vegetation helps maintain stream habitat conditions necessary for salmonids. Riparian zones and wetland/aquatic vegetation serve important functions in stream ecosystems such as providing shade (Poole and Berman 2001), sediment storage and filtering (Cooper et al. 1987, Mitsch and Gosselink 2000), nutrient inputs (Murphy and Meehan 1991), water quality improvements (Mitsch and Gosselink 2000), channel and stream bank stability (Platts 1991), source of woody debris that creates fish habitat diversity (Bryant 1983, Lisle 1986, Shirvell 1990), and both cover and shelter for fish (Bustard and Narver 1975, Wesche et al. 1987, Murphy and Meehan 1991).

Riparian vegetation removal will occur along the trail construction pathway. Most of the riparian trees removed do not provide cover or biological input into critical habitat streams as they are far from the stream bank. However, removal of vegetation increases erosion rates and may increase sediment transport to streams following construction if there is no restoration of vegetation or stabilization of the disturbed areas with BMPs. Temporary soil stabilization and hydroseeding BMPs would be implemented to stabilize constructed cut and fill slopes along the trail. Due to the abundant riparian vegetation present in the action area, removal of upland riparian trees and shrubs would not present a significant or meaningful loss of riparian habitat. Based on the above, NMFS expects the impacts of riparian vegetation removal to be insignificant to salmonids and their critical habitat.

Conclusion

Based on this analysis, NMFS concurs with FHWA-CFLHD that the proposed action is not likely to adversely affect the subject listed species and designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by FHWA-CFLHD or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) the proposed action causes take; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence; or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species'

contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

NMFS determined the proposed action would adversely affect EFH under the Pacific Coast Salmon FMP and the Pacific Groundfish FMP due to temporary impacts to water quality that may occur as the result of temporary and minor increase in turbidity, potential release of construction debris or materials, and vegetation removal. These effects are analyzed in the ESA section of this letter, and are applicable for this EFH effects analysis because there are no Habitat Areas of Particular Concern under the Groundfish FMPs located in the Action Area for this proposed project. This project includes best management practices and minimization measures described above that are anticipated to avoid and minimize potential impacts to EFH. In addition, the effects described above are minor and temporary, therefore, NMFS has no EFH Conservation Recommendations to offer at this time that would further reduce impacts to EFH.

The FHWA-CFLHD must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that would affect the conclusions of this EFH consultation (50 CFS 600.920(1)). This concludes the MSA portion of this consultation.

Please direct questions regarding this letter to Yvette Redler-Medina, Central Coast Office in Santa Cruz, California at (831) 460-7564 or by email at Yvette.Redler-Medina@noaa.gov.

Sincerely,

A. Ingham

Amanda Ingham
Central Coast Branch Chief
North-Central Coast Office

cc: Thomas Parker, FHWA-CFLHD, Lakewood, CO, Thomas.W.Parker@dot.gov
Copy to ARN File # 151422WCR2020SR00039

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wendy.longley@dot.gov

February 10, 2020

In Reply Refer To:
HFPM-16

Leilani Takano, Assistant Field Supervisor
U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office, North Coast Division
2493 Portola Road, Suite B
Ventura, CA 93003

Re: Section 7 Consultation for Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1)
Santa Cruz County, California

Dear Ms. Takano:

The Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD), and the Santa Cruz County Regional Transportation Commission (SCCRTC) are proposing the construction of a segment of the proposed Monterey Bay Sanctuary Scenic Trail (MBSST), in Santa Cruz County, California (CA). The proposed project consists of construction of 7.4 miles of new multi-use trail for pedestrians and bicyclists north of Santa Cruz, CA that would run parallel to an existing rail line. The proposed trail would begin at Davenport, CA and proceed south to its terminus at the Wilder Ranch State Park parking area. In addition, the proposed project would include improvements to the Yellowbank Beach Parking lot and the Davenport Parking lots. Pedestrian access to the trail from a third parking lot, the Bonny Doon parking area would also be improved (see Figure 1).

The enclosed biological assessment (BA) addresses potential project impacts on federally listed threatened and endangered species, including the endangered California red legged frog (*Rana draytonii*), and the San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*). The BA concludes the following:

- The California red legged frog are likely to occur in the action area because suitable habitat and past occupation of habitats have been documented. Because the proposed project has the potential to result in take to CRLFs, it is anticipated that the project ***may affect, and is likely to adversely affect*** the CRLF. Based on the scope of the proposed project, permanent and temporary impacts to CRLF critical habitat are unavoidable. Implementation of mitigation and minimization measures reduce the severity of these impacts. Because the project would permanently and temporarily affect physical and biological features of CRLF critical habitat, it is anticipated that the project ***may affect, and is likely to adversely affect*** CRLF critical habitat.
- The San Francisco Garter Snake are unlikely to occur in the action area however suitable habitat is present and the species has been documented north of the action area. Based on the available information, it is inferred that the likelihood of occurrence for the SFGS in the action area is low and consequently, potential effects to the SFGS are considered to be

discountable. As a result, it is anticipated that the project ***may affect, but is not likely to adversely affect*** the SFGS.

To comply with Section 7(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(ESA), FHWA is requesting formal consultation with the U.S. Fish and Wildlife Service on the California red legged frog and San Francisco garter snake.

In parallel, FHWA is also requesting consultation with the National Marine Fisheries Service for the marine listed species and Essential Fish Habitat.

If you require further information or have questions, please contact Timberly Belish, Environmental Protection Specialist, by email at timberley.belish@dot.gov or by phone at (720) 963-3683. We appreciate your assistance with this project.

Sincerely,

Wendy Longley
Project Manager

Enclosure:
Biological Assessment and Essential Fish Habitat Assessment for the Monterey Bay Sanctuary Scenic Trail CA FLAP SCR T5 (1) Santa Cruz County, California