Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter describes the current condition of the resources in the Study Area and identifies the potential effects of implementing the proposed project. Each subsection describes the present conditions, discusses the potential impacts of building the proposed project, and indicates what measures would be taken to avoid, minimize, or mitigate those impacts.

The environmental analysis contained within the following chapter considers the potential environmental consequences associated with implementation of the two proposed alternatives (the No Build Alternative [Alternative 1] and the Build Alternative [Alternative 2A and Alternative 2B (Preferred Alternative)]) and one design option (Design Option 3). For the purposes of this analysis, the proposed Build Alternative is analyzed concurrently where potential environmental effects would be similar; however, where applicable, the analysis of Alternative 2A and Alternative 2B (Preferred Alternative) are separated and discussed individually. On March 14, 2019, the Project Development Team (PDT) selected the Build Alternative with Alternative 2B as the Preferred Alternative (without Design Option 3). Therefore, any discussion of Alternative 2A or Design Option 3 is for disclosure purposes only.

The environmental impact analyses discuss potential impacts in three general categories: human environment, physical environment, and biological environment. The following discussion of potential effects is presented by environmental resource area. As part of the scoping and environmental analysis carried out for the proposed project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- **Coastal Zone:** California's Coastal Zone generally extends 1,000 yards inland from the mean high tide line. The Study Area is located approximately four miles (mi) from the Pacific Ocean and is not located within the Coastal Zone.

- **Wild and Scenic Rivers:** According to the Bureau of Land Management, there are no wild and scenic rivers located in the Study Area.
- **Farmlands:** There is no land designated as prime farmland, unique farmland, or land of statewide or local importance within the Study Area. In addition, there is no property currently under Williamson Act contract within the Study Area.
- **Timberland:** There are no designated timberlands or properties with a California Timberland Productivity Act contract within the Study Area.
- **Threatened and Endangered Species:** According to the *Natural Environment Study* (April 2017), the Biological Study Area (BSA) does not contain suitable habitat for any threatened or endangered species. However, a species list was obtained from the United States Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW), and is included in Chapter 4. As stated in the *Natural Environment Study* (2017), the effect finding for each threatened and endangered species on the NMFS and USFWS species list is "No Effect." Please refer to Table 2.1, Federal Species Effects Determinations, for a summary of these No Effect determinations.

Table 2.1: Federal Species Effects Determinations

Scientific Name	Common Name	Status		General Habitat Description	Effect Determination
		USFWS	CDFW		
INVERTEBRATES					
Branchinecta sandiegonensis	San Diego fairy shrimp	FE	None	Small, shallow (usually less than 12 inches deep), relatively clear but unpredictable vernal pools on coastal terraces. Pools must retain water for a minimum of 13 days for this species to reproduce (3–8 days for hatching, and 10–20 days to reach reproductive maturity).	No Effect
Streptocephalus woottoni	Riverside fairy shrimp	FE	None	Warm-water vernal pools (i.e., large, deep pools that retain water into the warm season) with low-to-moderate dissolved solids, in annual grassland areas interspersed through chaparral or coastal sage scrub vegetation. Suitable habitat includes some artificially created or enhanced pools, such as some stock ponds that have vernal pool-like hydrology and vegetation.	No Effect
BIRDS					
Charadrius alexandrinus nivosus (nesting)	Western snowy plover	FT (Coastal Population)	None	Sandy coastal beaches, lakes, alkaline playas. Scattered locations along coastal California and Channel Islands, inland at Salton Sea, and at various alkaline lakes.	No Effect
Coccyzus americanus occidentalis (nesting)	Western yellow-billed cuckoo	FT	SE	Breeds and nests in extensive stands of dense cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America; winters in South America.	No Effect

Table 2.1: Federal Species Effects Determinations

Scientific Name	Common Name	Status		General Habitat Description	Effect Determination
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Empidonax traillii extimus	Southwestern willow flycatcher	FE	SE	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern U.S. and possibly extreme northwestern Mexico. Winters in Central and South America. Below 6,000 ft in elevation.	No Effect
Polioptila californica californica	Coastal California gnatcatcher	FT	None	Inhabits coastal sage scrub in low-lying foothills and valleys up to about 1,640 ft in elevation in cismontane southwestern California and Baja California.	No Effect
Rallus obsoletus levipes	Light-footed (clapper) Ridgeway's rail	FE	SE	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on mollusks and crustaceans.	No Effect
Sternula antillarum browni (nesting colony)	California least tern	FE	SE	Nests along the coast from San Francisco Bay south to northern Baja California. Forages in shallow water. Colonial breeder on bare or sparsely vegetated, flat substrates, sand beaches, alkali flats, landfills, or paved areas.	No Effect
Vireo bellii pusillus	Least Bell's vireo	FE	SE	Riparian forests and willow thickets. The most critical structural component of least Bell's vireo habitat in California is a dense shrub layer 2–10 ft above ground.	No Effect
AMPHIBIANS					
Anaxyrus (Bufo) californicus	Arroyo toad	FE	None	Washes and arroyos with open water; sand or gravel beds; for breeding, pools with sparse overstory vegetation. Coastal and a few desert streams from Santa Barbara County to Baja California.	No Effect
FISH					
Catostomus santaanae	Santa Ana sucker	FT	None	The Santa Ana sucker's historical range includes the Los Angeles, San Gabriel, and Santa Ana River drainage systems located in Southern California. An introduced population also occurs in the Santa Clara River drainage system in Southern California. Found in shallow, cool, running water.	No Effect
Eucyclogobius newberryi	Tidewater goby	FE	None	Brackish water habitats along the California coast from Agua Hedionda Lagoon (San Diego County) to the mouth of the Smith River (Del Norte County). Found in shallow lagoons and lower stream reaches.	No Effect
Oncorhynchus mykiss irideus	Steelhead (Southern California Distinct Population Segment)	FE	None	Occurs in cool water streams; spawns in areas of gravelly substrate in riffles or pool tails. Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	No Effect

Table 2.1: Federal Species Effects Determinations

Scientific Name	Common Name	Status		General Habitat Description	Effect Determination
		USFWS	CDFW		
FLOWERING PLANTS					
Astragalus brauntonii	Braunton's milk-vetch	FE	None	Perennial herb. Generally shallow calcium carbonate soils derived from marine substrates. Typically associated with the fire-dependent chaparral habitat on limestone and on down-wash sites below 2,100 ft in elevation.	No Effect
Chloropyron maritimum spp. *maritimum*	Salt marsh bird's-beak	FE	SE	Annual herb. Coastal dunes and salt marshes.	No Effect
Brodiaea filifolia	Thread-leaved brodiaea	FT	SE	Bulbiferous perennial herb. Occurs primarily in vernal pools, but also found in chaparral, cismontane woodlands, coastal scrub, playas, and valley and foothill grasslands, usually in clay soils. From 115 to 4,003 ft in elevation.	No Effect
Dodecahema leptoceras	Slender-horned spineflower	FE	SE	Annual herb. Occurs in chaparral, cismontane woodland and coastal scrub in sandy soils. From 600 to 2,280 ft in elevation.	No Effect
Dudleya cymosa ssp. *ovatifolia*	Santa Monica dudleya	FT	None	Perennial herb. Cracks and crevices of rock outcrops and cliff faces (volcanic or sedimentary) in canyons (primarily on north-facing slopes) in chaparral and coastal scrub at 500 to 5,500 ft in elevation.	No Effect
Dudleya stolonifera	Laguna Beach dudleya	FT	ST	Perennial stoloniferous herb. Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands, often in thin soil on north-facing sandstone cliffs. From 30 to 780 ft in elevation.	No Effect
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE	SE	Riversidean alluvial fan sage scrub and chaparral in sandy or gravelly soils of floodplains and terraced fluvial deposits of the Santa Ana River and larger tributaries (Lytle and Cajon Creeks, lower portions of City and Mill Creeks) at 300 to 2,100 ft in elevation in San Bernardino and Riverside Counties.	No Effect
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE	SE	Annual or perennial herb. Vernal pools and similar mesic habitats in coastal scrub and grassland at 50 to 2,000 ft in elevation.	No Effect
Nasturtium (Rorippa) gambelii	Gambel's watercress	FE	ST	Marshes from 20 to 1,100 ft in elevation.	No Effect
Orcuttia californica	California Orcutt grass	FE	SE	Annual grass. Vernal pools from 50 to 2,200 ft in elevation.	No Effect
Verbesina dissita	Big-leaved crownbeard	FT	ST	Perennial herb. Occurs in southern maritime chaparral (90% of time) and coastal scrub (10% of time) from 135 to 615 ft in elevation along the immediate coast.	No Effect
MAMMALS					
Perognathus longimembris pacificus	Pacific pocket mouse	FE	None	Historically occupied open habitats on sandy soils along the coast from Los Angeles to the Mexican border.	No Effect

Source: *Natural Environment Study* (2017).
CDFW = California Department of Fish and Wildlife
FE= Federally Endangered
ft = foot/feet
FT= Federally Threatened
SE= State Endangered
SSC= Species of Special Concern
ST= State Threatened
USFWS = United States Fish and Wildlife Service