

3.3.2 Wetlands and Other Waters

This section discusses wetlands and other waters and summarizes the Jurisdictional Delineation Report (JD) completed in March 2012 and NES completed in August 2011 and revised in March 2012.

3.3.2.1 Regulatory Setting

Wetlands and other waters are protected under many laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the CWA (33 U.S.C. 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (i.e., water-loving) vegetation, wetland hydrology, and hydric soils (i.e., soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by USACE with oversight by EPA.

USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with EPA's Section 404(b)(1) Guidelines (EPA 40 CFR Part 230) and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by EPA in conjunction with USACE and allow the discharge of dredged or fill material into the aquatic system (i.e., waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a

LEDPA to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by CDFW, SWRCB, and the RWQCBs. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the CFGC require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by WDRs and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities that may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. See Section 3.2.2, Water Quality and Stormwater Runoff, for more details.

3.3.2.2 Affected Environment

USACE is a NEPA cooperating agency (see Appendix I for coordination with USACE) and a jurisdictional delineation has been prepared for this project, provided as Appendix D of the NES (Jurisdictional Delineation). A routine study area delineation was conducted for USACE-defined waters of the U.S. and wetlands using the methods set forth in the USACE Wetland Delineation Manual (EL 1987) and the Arid West Regional Supplement, version 2.0 (USACE 2008). On July 14, 2014, Caltrans submitted request for a Preliminary Jurisdictional Determination. The USACE

Preliminary Jurisdictional Determination was received August 13, 2014. Details are still preliminary at this time and subject to verification by USACE. Further coordination efforts with the USACE regarding the Jurisdictional Determination will occur during the design phase.

The following definitions are from the Rapanos Guidance Memoranda (USACE 2007, 2008):

- Adjacent,” as defined in USACE and EPA regulations, means “bordering, contiguous, or neighboring.” Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are ‘adjacent wetlands.’ Wetlands that are not separated from a tributary by upland features, such as a berm or dike, are considered “abutting.”
- A “tributary,” as defined in the Rapanos guidance memoranda, means a natural, man-altered, or man-made water body that carries flow directly or indirectly into traditional navigable waters. For purposes of determining “significant nexus” with a traditional navigable water, a “tributary” is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary, downstream to the point where the tributary enters a higher order stream).
- A water body is considered to have a “significant nexus” with a Traditional Navigable Water (TNW) if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream TNW. A TNW includes all of the “navigable waters of the United States,” defined in 33 CFR § 329 and by numerous decisions of the Federal courts, plus all other waters that are navigable-in-fact.
- In the context of CWA jurisdiction post-Rapanos, a water body is “relatively permanent” if its flow is year-round or its flow is continuous at least “seasonally,” (e.g., typically 3 months). Wetlands adjacent to a “relatively permanent” tributary are also jurisdictional if those wetlands directly abut such a tributary (USACE 2007).

USACE jurisdiction within the BSA was based on the presence of an Ordinary High Water Mark (OHWM) and whether a particular feature was considered a navigable water, a wetland adjacent to navigable water, or a non-navigable tributary that sustained relatively permanent flows to a navigable water. Non-navigable features with nonrelatively permanent flows tributary to a navigable water required a significant nexus determination to determine jurisdiction. Non-navigable features with nonrelatively permanent flows that did not have a significant nexus with a navigable water, as well as isolated features, were classified as nonjurisdictional.

A total of 115 features within 4 watersheds (i.e., San Gabriel River-Coyote Creek; Anaheim Bay-Huntington Harbour; Santa Ana River; and Newport Bay) were observed within the BSA, consisting of 19 drainages potentially subject to USACE jurisdiction. Total USACE jurisdiction within the BSA is detailed within Table 3.3.2-1, Appendix D of the NES, and shown in the Figures in Appendix O5 through O7; findings are still preliminary at this time and subject to verification by USACE, Santa Ana RWQCB, and CDFW.

Santa Ana RWQCB jurisdiction applies to those same features subject to USACE regulation within the BSA. Accordingly, the current estimate indicates 19 drainages are subject to RWQCB compliance as well. Current estimated areas under Santa Ana RWQCB jurisdiction within the BSA are included in Table 3.3.2-1 and shown in the Figures in Appendix O5 through O7.

Total CDFW jurisdiction within the BSA is detailed in Table 3.3.2-1 and are shown in the Figures in Appendix O5 through O7. CDFW jurisdiction within the BSA includes 19 drainages that contain a well-defined bed and bank, function as either modified natural drainages, and/or function as artificial drainages that have acquired the physical attributes of natural stream courses and provide low values for fish and wildlife. Each of these features contains biological resources that are hydrologically connected to a larger, downstream waterbody; therefore, they provide low functions and values for wildlife.

One feature, identified as 4-4, contains wetlands as defined by USACE guidelines. The wetland is connected to the San Gabriel River. The wetland may provide some function as flood control, for sediment trapping, and some low-value habitat for wetland species because of its disturbed nature and its proximity to the highway. The value of the wetland is minimal because the San Gabriel River in this area does not provide any recreational or aesthetic benefit to the surrounding community.

3.3.2.3 Environmental Consequences

The project build alternatives would result in temporary effects and/or permanent loss to waters of the U.S./State within jurisdictional areas. All impacts to waters of the U.S./State would require permit approval from USACE, RWQCB, and CDFW prior to construction. As discussed previously and as shown in the Figures in Appendix O5 through O7 and Table 3.3.2-2, USACE, Santa Ana RWQCB, and/or CDFW jurisdictional limits are the same for all 19 drainages. The proposed project would not impact any wetlands.

As mentioned previously, these 19 drainages are either modified natural drainages and/or function as artificial drainages and provide low functions and values for fish and wildlife; therefore, temporary and permanent impacts to these drainages would have no effect on the existing functions and values of these waters.

Table 3.3.2-1: Summary of Potential Jurisdictional Areas within the BSA

Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
San Gabriel River-Coyote Creek Watershed							
1-1	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (26 April 2010); drains road runoff south to culvert, then underground southwest to Feature 1-2.	none	168	--	--	--	--
1-2	Flood Control Facility: 16-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; 1-inch standing water present during survey (26 April 2010); drains road and landscape runoff from developed and park areas to south to Coyote Creek and the San Gabriel River (a Traditional Navigable Water [TNW]).	none	6,085	--	--	--	--
3-1	Ditch: 6-ft-wide concrete v-ditch; non-RPW with no significant nexus; no OHWM; unvegetated; dry during survey (26 April 2010); drains landscape and road runoff south to Alamitos Channel and the San Gabriel River (an RPW).	none	5,489	--	--	--	--
3-2	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; no OHWM; drains road and landscape runoff to Los Alamitos Channel and the San Gabriel River (an RPW); unvegetated.	none	397	--	--	--	--
3-3	Ditch: 3-ft-wide concrete v-ditch; non-RPW with no significant nexus; no OHWM; drains road and landscape runoff to Los Alamitos Channel and the San Gabriel River (an RPW); unvegetated.	none	211	--	--	--	--
3-4	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; no OHWM; drains road and landscape runoff to Feature 3-5 and the San Gabriel River (an RPW); unvegetated.	none	357	--	--	--	--
3-5*	Flood Control Facility: 30-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Los Alamitos Channel and the San Gabriel River (a TNW).	none	483	--	--	--	--
3-6*	Flood Control Facility: Coyote Creek; 150-ft-wide concrete channel; blue line; RPW; unvegetated; drains commercial, residential, and road runoff to San Gabriel River (an RPW).	150	333	1.22	--	1.22	1.22
4-1*	Flood Control Facility and Detention Basin: Los Alamitos Channel; blue line; earthen basin; RPW; 2 inches flowing water during survey (27 April 2010); drains road, residential, and commercial runoff to the San Gabriel River (an RPW); upland vegetated.	220	4,878	12.45	--	12.45	12.45
4-2*	Flood Control Facility: Rossmoor Storm Channel; blue line; 18-ft-wide concrete channel; unvegetated; drains to Los Alamitos Channel and San Gabriel River (a TNW).	none	18	--	--	--	--

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Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
4-3*	Flood Control Facility: Mainway Drive Channel; 15-ft-wide concrete channel; unnamed blue line; RPW; drains west to Los Alamitos Channel and San Gabriel River (an RPW); drains surface water runoff.	4	974	0.09	--	0.09	0.09
4-4*	Flood Control Facility and Wetland: San Gabriel River; blue line; RPW; earthen and rock riprap channel with included wetland.	258	384	1.30	0.93	2.23	2.61
4-5	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation runoff to Mainway Drive Channel, Los Alamitos Channel, and San Gabriel River (a TNW).	none	1,103	--	--	--	--
4-6	Flood Control Facility: 11-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains storm and irrigation runoff to Los Alamitos Channel and San Gabriel River (a TNW).	none	620	--	--	--	--
5-1*	Flood Control Facility: Los Cerritos Channel; 94-ft-wide; blue line; concrete channel; RPW, 1-inch flowing water during survey (27 April 2010); unvegetated; drains residential, industrial, and road runoff to Los Cerritos Channel and Alamitos Bay (both RPWs).	94	237	0.50	--	0.50	0.50
5-2	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; no OHWM; unvegetated; dry during survey (26 April 2010); drains stormwater from residential lands to street gutter that drains to Los Cerritos Channel (an RPW).	none	390	--	--	--	--
5-3	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (26 April 2010); drains residential and roadway runoff to street gutter that drains to Los Cerritos Channel (an RPW).	none	608	--	--	--	--
5-4	Ditch: 1-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains commercial and residential runoff to Los Cerritos Channel (an RPW).	none	565	--	--	--	--
5-5	Ditch: 2-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains roadway and landscape runoff to street gutter and Los Cerritos Channel (an RPW).	none	263	--	--	--	--
6-1	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains roadway and landscape runoff to street gutter that drains to Los Cerritos Channel (an RPW).	none	1113	--	--	--	--
6-2	Flood Control Facility: 16-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains road runoff to San Gabriel River (an RPW).	none	756	--	--	--	--

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Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
6-3	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (26 April 2010); drains road runoff to Los Alamitos Channel and San Gabriel River (a TNW).	none	417	--	--	--	--
6-4	Ditch: 8-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; drains irrigation and road runoff to Copa De Oro Channel, Los Alamitos Channel and the San Gabriel River (an RPW).	none	3,858	--	--	--	--
7-1	Ditch: 8-ft-wide concreted v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (28 April 2010); drains road runoff to Los Alamitos Channel and the San Gabriel River (an RPW).	none	1,127	--	--	--	--
7-2*	Flood Control Facility: Montecito Channel (also known as Copa De Oro Channel); 12-ft-wide concrete (east of I-405) and 40-ft-wide earthen (west of I-405); unnamed blue line; RPW; drains surface water and irrigation runoff to Los Alamitos Channel and San Gabriel River (an RPW).	3-25	2,233	1.02	--	1.02	1.02
7-3	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains landscape runoff to Copa De Oro Channel.	none	374	--	--	--	--
7-4	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains surface and irrigation runoff to Los Alamitos Channel and San Gabriel River (an RPW).	none	5,210	--	--	--	--
7-5	Ditch: Bixby Storm Channel; 6-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Los Alamitos Channel and the San Gabriel River (an RPW).	none	1,683	--	--	--	--
7-6	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Los Alamitos Channel and the San Gabriel River (an RPW).	none	1,512	--	--	--	--
7-7*	Flood Control Facility: Seal Beach Boulevard Channel; 12-ft-wide concrete channel; unnamed blue line; RPW; unvegetated; drains surface water and irrigation runoff to Copa De Oro Channel, Los Alamitos Channel, and the San Gabriel River (an RPW).	none	577	--	--	--	--
8-1	Ditch: 8-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains surface and irrigation runoff to street gutter, Los Alamitos Channel, and the San Gabriel River (an RPW).	none	466	--	--	--	--
8-2 ¹	Flood Control Facility: Federal Storm Channel; 7-ft-wide concrete channel; non-RPW with significant nexus; unvegetated; drains irrigation and surface runoff to Los Alamitos Channel and San Gabriel River (an RPW).	2	9306	0.43	--	0.43	0.43

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Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
8-3	Flood Control Facility: 6-ft-wide concrete channel; non-RPW with significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Los Alamitos Channel and the San Gabriel River (an RPW).	none	1,092	--	--	--	--
9-1	Flood Control Facility and Detention basin: 6-ft-wide concrete v-channel; non-RPW with no significant nexus; upland vegetated detention basin; drains road and irrigation runoff to Los Alamitos Channel and the San Gabriel River (an RPW).	none	1,366	--	--	--	--
9-2	Flood Control Facility: 2-ft-wide concrete box channel; non-RPW with no significant nexus; unvegetated; drains irrigation and road runoff underground through culvert to Los Alamitos Channel and the San Gabriel River (an RPW).	none	6,463	--	--	--	--
Anaheim Bay-Huntington Harbour Watershed							
10-1*	Flood Control Facility: Bolsa Chica Channel; 38-ft-wide; blue line; RPW; concrete/earthen/rock riprap south of I-405; drains to tidally influenced portion of Bolsa Chica Channel (an RPW).	38	583	0.50	--	0.50	0.50
10-2 ²	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	1,706	--	--	--	--
10-3	Flood Control Facility: 15-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	590	--	--	--	--
10-4	Ditch: 8-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	None	444	--	--	--	--
10-5	Flood Control Facility: 27-ft-wide concrete channel; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	1,102	--	--	--	--
11-1*	Flood Control Facility: 22-ft-wide concrete channel; 1-inch standing water during survey (28 April 2010); unvegetated; drains roadside and landscape runoff to Bolsa Chica Channel (an RPW).	none	2,781	--	--	--	--
11-2	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (28 April 2010); drains landscape and road runoff to Bolsa Chica Channel (an RPW).	none	5,633	--	--	--	--
11-3	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; drains road runoff to Feature 11-1 and Bolsa Chica Channel (an RPW).	none	30	--	--	--	--

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Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
11-4	Flood Control Facility: 12-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; dry during survey (28 April 2010); drains landscape and road runoff to Bolsa Chica Channel (an RPW).	none	1,382	--	--	--	--
11-5	Flood Control Facility: 7-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	574	--	--	--	--
11-6	Flood Control Facility: 15-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	1,013	--	--	--	--
11-7	Flood Control Facility: 7-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and commercial surface runoff to Bolsa Chica Channel (an RPW).	none	5,141	--	--	--	--
12-1	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (26 April 2010); drains irrigation and road runoff to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	6,005	--	--	--	--
14-1	Ditch: 4-ft-wide concrete v-ditch; no OHWM; non-RPW with no significant nexus; dry during survey (26 April 2010); unvegetated; drains irrigation and road runoff to Anaheim Barber City Channel.	none	132	--	--	--	--
14-2	Flood Control Facility: 6-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (26 April 2010); drains landscape, commercial, and road runoff underground to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	1,484	--	--	--	--
16-1	Flood Control Facility: 16-ft-wide concrete channel; non-RPW with significant nexus; unvegetated; drains irrigation and residential surface runoff to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	2	242	0.01	--	0.01	0.01
16-2*	Flood Control Facility: Anaheim Barber City Channel; 40-ft-wide concrete box channel; RPW; blue line; unvegetated; drains surface runoff to Bolsa Chica Channel (an RPW).	40	483	0.47	--	0.47	0.47
16-3*	Flood Control Facility: Westminster Avenue Channel; 34-ft-wide concrete channel; RPW; blue line; unvegetated; drains irrigation and surface runoff to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	5	1,218	0.14	--	0.14	0.14
16-4	Flood Control Facility: 15-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Westminster Avenue Channel, Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	1,920	--	--	--	--

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				USACE Other Waters	USACE Wetland	RWQCB	CDFW
16-5	Flood Control Facility: 6-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	644	--	--	--	--
16-6	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	3,084	--	--	--	--
17-1	Ditch: 2-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Anaheim Barber City Channel and Bolsa Chica Channel (an RPW).	none	429	--	--	--	--
17-2	Flood Control Facility: 4-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to street gutter.	none	1,704	--	--	--	--
17-3	Ditch: 4-ft-wide concrete v-ditch; no OHWM; non-RPW with no significant nexus; unvegetated; drains surface runoff underground through culvert to Bolsa Chica Channel (an RPW).	none	1,313	--	--	--	--
17-4	Ditch: 4-ft-wide earthen ditch; no OHWM; non-RPW with no significant nexus; upland vegetated; drains surface runoff to Bolsa Chica Channel (an RPW).	none	451	--	--	--	--
17-5	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Bolsa Chica Channel (an RPW).	none	1,004	--	--	--	--
18-1	Ditch: 4-ft-wide concrete and earthen v-channel; non-RPW with no significant nexus; unvegetated; drains surface runoff underground through culvert to Westminster Channel (an RPW).	none	2,547	--	--	--	--
18-2	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Westminster Channel (an RPW).	none	2,458	--	--	--	--
18-3	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Westminster Channel (an RPW).	none	810	--	--	--	--
18-4*	Flood Control Facility: Westminster Channel; concrete box channel; blue line; RPW; unvegetated; drains surface runoff to tidal portions of the channel (a TNW).	30	658	0.50	--	0.50	0.50
18-5	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Westminster Channel (an RPW).	none	1,052	--	--	--	--

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Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
18-6	Ditch: 1-ft-wide concrete ditch; no OHWM; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground to Westminster Channel (an RPW).	none	564	--	--	--	--
18-7	Ditch: 3-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Westminster Channel (an RPW).	none	1,159	--	--	--	--
18-8	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation runoff underground through culvert to Westminster Channel (an RPW).	none	2,629	--	--	--	--
19-1	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Westminster Channel (an RPW).	none	3,313	--	--	--	--
19-2	Ditch: 5-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground through culvert to Westminster Channel (an RPW).	none	3,108	--	--	--	--
20-1	Flood Control Facility: Edinger Storm Channel; 20-ft-wide concrete channel; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	3,039	--	--	--	--
21-1	Flood Control Facility: Newland Storm Channel; 35-ft-wide rock riprap and concrete channel; 6 inches flowing water during survey (4 August 2009); no significant nexus; low-density hydrophytic vegetation between riprap; drains residential and road runoff to East Garden Grove Wintersburg Channel (an RPW).	none	1,400	--	--	--	--
21-2*	Flood Control Facility: East Garden Grove Wintersburg Channel (EGGWC); concrete-lined open channel with more than 1,000 ft of box culvert extending to Chapman Avenue; farther upstream, EGGWC continues as an underground facility. Downstream of C05B02, EGGWC is predominantly a graded earthen channel with some reaches of concrete and riprap overlay lining. The size of the existing facility is a 77-inch by 121-ft elliptical RCP and a triple 10-ft by 10-ft RCB under I-405; blue line; RPW; 2 inches flowing water present during survey (4 August 2009); unvegetated within study area; drains surface runoff to tidally influenced portion of the Channel.	26-65	267	0.14	--	0.14	0.14
21-3	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	1,994	--	--	--	--
21-4	Flood Control Facility: 10-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	1,816	--	--	--	--

Table 3.3.2-1: Summary of Potential Jurisdictional Areas within the BSA

Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
21-5	Flood Control Facility: Heil Avenue Storm Channel; 18-ft wide concrete box channel; non-RPW with no significant nexus; unvegetated; drains surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	590	--	--	--	--
22-1	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and road runoff to East Garden Grove Wintersburg Channel (an RPW).	none	492	--	--	--	--
22-2	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	1,953	--	--	--	--
22-3	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Ocean View Channel and East Garden Grove Wintersburg Channel (an RPW).	none	1,809	--	--	--	--
22-4	Ditch: 5-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground to East Garden Grove Wintersburg Channel (an RPW).	none	573	--	--	--	--
22-5	Ditch: 8-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Ocean View Channel and East Garden Grove Wintersburg Channel (an RPW).	none	749	--	--	--	--
22-7 ²	Flood Control Facility: 12-ft-wide concrete box channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Ocean View Channel and East Garden Grove Wintersburg Channel (an RPW).	none	1,312	--	--	--	--
23-1*	Flood Control Facility: Ocean View Channel; 25-ft-wide concrete box channel; blue line; RPW; unvegetated; drains irrigation and surface runoff underground to East Garden Grove Wintersburg Channel (an RPW).	20	466	0.86	--	0.86	0.86
Santa Ana River Watershed							
22-6 ¹	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation runoff to Ocean View Channel and East Garden Grove Wintersburg Channel (an RPW).	none	729	--	--	--	--
22-8	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff underground to Ocean View Channel and East Garden Grove Wintersburg Channel (an RPW).	none	1,174	--	--	--	--

Table 3.3.2-1: Summary of Potential Jurisdictional Areas within the BSA

Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
23-2	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	916	--	--	--	--
23-3	Flood Control Facility: 4-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	540	--	--	--	--
23-4	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	354	--	--	--	--
23-5	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to East Garden Grove Wintersburg Channel (an RPW).	none	1,309	--	--	--	--
23-6	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	1,424	--	--	--	--
23-7	Flood Control Facility: 5-ft-wide concrete v-channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	1,348	--	--	--	--
24-1	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	2,195	--	--	--	--
24-2	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Talbert Channel (an RPW).	none	1,007	--	--	--	--
24-3	Flood Control Facility: 15-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Fountain Valley Channel (an RPW).	none	2,457	--	--	--	--
24-4	Flood Control Facility: 18-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Fountain Valley Channel (an RPW).	none	2,083	--	--	--	--
25-1	Flood Control Facility: 6-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Fountain Valley Channel (an RPW).	2	814	0.04	--	0.04	0.04
25-2	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Fountain Valley Channel (an RPW).	none	1,449	--	--	--	--
25-3	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Fountain Valley Channel (an RPW).	none	2,186	--	--	--	--
25-4*	Flood Control Facility: Fountain Valley Channel; blue line; 40-ft-wide rock riprap channel; RPW; negligible hydrophytic vegetation; drains to the Huntington Beach Channel (a TNW).	9	357	0.19	--	0.19	0.21

Table 3.3.2-1: Summary of Potential Jurisdictional Areas within the BSA

Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
25-5	Flood Control Facility: 6-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to tidal portions of Fountain Valley Channel (an RPW).	none	2,579	--	--	--	--
26-1*	Flood Control Facility: Santa Ana River; concrete-lined rectangular channel with a central low-flow channel under I-405. The channel is approximately 240 ft wide, with vertical walls approximately 23 ft in height; blue line; RPW; unvegetated; drains to Pacific Ocean (a TNW).	238	998	5.44	--	5.44	5.44
26-2	Ditch: 6-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to the Santa Ana River (an RPW).	2	816	--	--	--	--
27-1*	Flood Control Facility: Greenville Banning Channel; 73-ft-wide concrete/rock riprap channel northeast of I-405; blue line; RPW; unvegetated; 4 inches flowing water during survey (28 April 2010); drains surface runoff to the Santa Ana River (a TNW).	30	677	0.52	--	0.52	0.52
27-2	Flood Control Facility: 8-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff to Greenville Banning Channel (an RPW).	none	537	--	--	--	--
28-1	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (28 April 2010); drains irrigation and road runoff to street gutter.	none	1,204	--	--	--	--
28-2*	Flood Control Facility: Gisler Channel; 56-ft-wide; concrete upslope and earthen/rock riprap downslope; blue line; RPW; unvegetated; drains surface water runoff to Greenville Banning Channel (an RPW).	20	1237	0.61	--	0.61	0.61
29-1	Ditch: 4-ft-wide concrete v-ditch; non-RPW with no significant nexus; upland vegetation; drains road runoff to Greenville Banning Channel (an RPW).	none	1,676	--	--	--	--
29-2	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains irrigation and surface runoff drains surface water runoff to Newport Back Bay (a TNW).	none	1,829	--	--	--	--
30-1	Flood Control Facility: 5-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains road, landscape, and commercial surface runoff to Newport Back Bay (a TNW).	none	1919	--	--	--	--
30-2	Ditch: 5-ft-wide concrete v-ditch; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains road and landscape runoff to Newport Back Bay (a TNW).	none	1,548	--	--	--	--

Table 3.3.2-1: Summary of Potential Jurisdictional Areas within the BSA

Feature ID	Feature Description	OHWM width (ft)	Length in BSA(ft)	Jurisdiction within BSA(acres)			
				USACE Other Waters	USACE Wetland	RWQCB	CDFW
31-1	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; dry during survey (27 April 2010); drains landscape and road runoff to Newport Back Bay (a TNW).	none	1,858	--	--	--	--
Newport Bay Watershed							
31-2*	Flood Control Facility: Santa Ana Delhi Channel; 58-ft-wide concrete box channel north of I-405; 42-ft-wide south of I-405; blue line; RPW; unvegetated; 2 inches flowing water present during survey (27 April 2010); drains commercial surface, road, and landscape runoff to Newport Back Bay (a TNW).	42-58	394	0.41	--	0.41	0.41
31-3	Flood Control Facility: 4-ft-wide concrete channel; non-RPW with no significant nexus; unvegetated; drains landscape and road runoff to Newport Back Bay (a TNW).	none	234	--	--	--	--
31-4	Flood Control Facility: 12-ft-wide concrete channel; non-RPW with no significant nexus; dry during survey (27 April 2010); unvegetated; drains residential and road runoff to Newport Back Bay (a TNW).	none	2,673	--	--	--	--
Total				27.0	0.9	27.9	28.3
¹ Also in Anaheim Bay-Huntington Harbour Watershed ² Also in Santa Ana River Watershed -- No jurisdiction * Identified as an RPW in Appendix D of the NES.							

The project permitting process and associated permit conditions would require avoidance where feasible and mandate conditions to minimize effects on jurisdictional areas and, where required, to reduce/compensate for anticipated effects on waters of the U.S./State. Potential project effects on waters of the U.S./State are discussed below. Detailed effects by alternative on each of the jurisdictional drainages are summarized in Table 3.3.2-2.

Table 3.3.2-2: Temporary Impacts and Permanent Loss by Alternative within the BSA

Feature ID and Name	Alternative 1		Alternative 2		Alternative 3	
	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)
San Gabriel River - Coyote Creek Watershed						
3-6 Coyote Creek	--	--	--	--	--	--
4-1 Los Alamitos Channel	0.03	0.06	0.03	0.06	0.03	0.06
4-3 Mainway Dr. Channel	--	--	--	--	--	--
4-4 San Gabriel River	--	--	--	--	--	--
5-1 Los Cerritos Channel	--	--	--	--	--	--
7-2 Copa De Oro Channel	0.03	0.42	0.03	0.42	0.03	0.42
8-2 ¹ Unnamed	--	--	--	--	--	--
Anaheim Bay – Huntington Harbour Watershed						
10-1 Bolsa Chica Channel	0.12	0.04	0.12	0.04	0.12	0.04
16-1 Unnamed	--	--	--	--	--	--
16-2 Anaheim Barber Channel	0.12	0.06	0.10	0.07	0.10	0.07

Table 3.3.2-2: Temporary Impacts and Permanent Loss by Alternative within the BSA

Feature ID and Name	Alternative 1		Alternative 2		Alternative 3	
	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)
16-3 Westminster Avenue Channel	0.02	0.10	0.02	0.10	0.02	0.10
18-4 Westminster Channel	0.15	0.05	0.15	0.05	0.15	0.05
21-2 East Garden Grove Wintersburg Channel	0.07	0.07	0.04	0.10	0.04	0.10
23-1 Ocean View Channel	0.48	0.12	0.48	0.12	0.48	0.12
Santa Ana River Watershed						
25-4 Fountain Valley Channel	0.06	0.06	0.06	0.06	0.06	0.06
26-1 Santa Ana River	3.85	0.01	3.85	0.01	3.85	0.01
27-1 Greenville Banning Channel	--	--	--	--	0.01	0.11
28-2 Gisler Channel	--	--	--	--	0.46	--
Newport Bay Watershed						
31-2 Santa Ana Delhi Channel	--	--	--	--	--	--
TOTAL	4.93	0.99	4.88	1.03	5.33	1.14
¹ Also in Anaheim Bay-Huntington Harbour Watershed -- No impact Acres have been rounded to 0.01-acre; any features listed as 0.00-acre						

Source: URS 2012.

Permanent Impacts

Permanent project effects on jurisdictional areas are associated with dredge and/or fill associated with construction of the operational components within jurisdictional areas (i.e. roadway fills, structures, and drainage enhancements/reconstruction) for each alternative, as described in Chapter 2, Project Alternatives. Most of the impacts are associated with extending box culverts to accommodate freeway widening. Notable exceptions include project effects on the Santa Ana River, which would involve placement of new piers and/or extension of pier walls within the channel and construction of a bypass between the Bixby and Montecito channels (i.e., Bixby bypass) to reduce flooding and increase freeboard (see Section 3.2.1, Hydrology and Floodplains). Permanent impacts are estimated at 1.14 acres to jurisdictional waters; however impacts would be minimal and the existing functions and values of waters will not be lost. During project development, where feasible, the project footprint was minimized through the use of retaining walls, design exceptions, and other engineering minimization efforts. As described above, most of the project effects on jurisdictional waters are associated with extension of box culverts to accommodate the widening. Other than design exceptions to reduce lane width, buffers, or other design features to reduce, no other minimization is feasible; however, where feasible, design modifications were used to minimize project effects, such as channel geometry at the Bixby bypass. Additionally, water quality within project-related jurisdictional areas would be enhanced through implementation of permanent treatment BMPs, as previously discussed in Section 3.2.2, Water Quality and Stormwater Runoff.

No Build Alternative

The No Build Alternative does not propose any operational component or other disturbance in the BSA; therefore, the No Build Alternative would result in no adverse effects to wetlands or other waters of the U.S./State.

Alternative 1

Based on the preliminary design for Alternative 1, as described in Chapter 2, Project Alternatives, this alternative would result in permanent operational effects associated with placement of roadway fills, structures, and required drainage enhancements/reconstruction. Permanent loss of USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, and permanent BMPs, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.48-acre
- Anaheim Bay-Huntington Harbour Watershed: 0.44-acre
- Santa Ana River Watershed: 0.07-acre

- Newport Bay Watershed: 0.0-acre

Alternative 2

Based on the preliminary design for Alternative 2, as described in Chapter 2, Project Alternatives, this alternative would result in permanent operational effects associated with placement of roadway fills, structures, and required drainage enhancements/reconstruction. Permanent loss of USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, and permanent BMPs, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.48-acre
- Anaheim Bay-Huntington Harbour Watershed: 0.48-acre
- Santa Ana River Watershed: 0.07-acre
- Newport Bay Watershed: 0.0-acre

Alternative 3 (Preferred Alternative)

Based on the preliminary design for Alternative 3, as described in Chapter 2, Project Alternatives, this alternative would result in permanent operational effects associated with placement of roadway fills, structures, and required drainage enhancements/reconstruction. Permanent loss of USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, and permanent BMPs, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.48-acre
- Anaheim Bay-Huntington Harbour Watershed: 0.48-acre
- Santa Ana River Watershed: 0.18-acre
- Newport Bay Watershed: 0.0-acre

Temporary Impacts

Temporary impacts to jurisdictional areas are associated with construction access to facilitate construction of the project components for each alternative, as described in Chapter 2, Project Alternatives. All construction activities would be conducted in accordance with all applicable NPDES requirements, as discussed in Section 3.2.2, Water Quality and Stormwater Runoff. Additionally, potential effects during construction would be minimized through designation of ESAs at the limits of permitted activities and would be finalized during the next phase of project

development (i.e., PS&E, including permitting). Furthermore, all temporarily impacted areas would be returned to their pre-project condition.

No Build Alternative

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, the No Build Alternative would result in no adverse effects to wetlands or other waters of the U.S./State.

Alternative 1

Based on the preliminary design for Alternative 1, as described in Chapter 2, Project Alternatives, this alternative would result in temporary construction-related effects on USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.06-acrs
- Anaheim Bay-Huntington Harbour Watershed: 0.96-acre
- Santa Ana River Watershed: 3.91-acre
- Newport Bay Watershed: 0.0-acre

Alternative 2

Based on the preliminary design for Alternative 2, as described in Chapter 2, Project Alternatives, this alternative would result in temporary construction-related effects on USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.06-acre
- Anaheim Bay-Huntington Harbour Watershed: 0.91-acre
- Santa Ana River Watershed: 3.91-acre
- Newport Bay Watershed: 0.0-acre

Alternative 3 (Preferred Alternative)

Based on the preliminary design for Alternative 3, as described in Chapter 2, Project Alternatives, this alternative would result in temporary construction-related effects on USACE, RWQCB, and CDFW jurisdictional areas within each watershed is provided below. With incorporation of all permit conditions, no adverse effects on jurisdictional areas are anticipated.

- San Gabriel River/Coyote Creek Watershed: 0.06-acre

- Anaheim Bay-Huntington Harbour Watershed: 0.91-acre
- Santa Ana River Watershed: 4.38-acre
- Newport Bay Watershed: 0.0-acre

3.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures will avoid, minimize, and/or mitigate potential temporary and permanent impacts to natural communities:

BIO-2 During Design, Caltrans/OCTA shall consult with the appropriate responsible resource agency (e.g., CDFW, USACE, and RWQCB) to verify delineation results, determine permanent losses and temporary impact areas, and identify compensatory mitigation, as applicable. Prior to undertaking ground-disturbing activities within or immediately adjacent to any aquatic resource areas, OCTA and/or their consultant shall obtain all obligatory discretionary permits/ authorizations.

BIO-3 Prior to clearing or construction, highly visible barriers (e.g., orange construction fencing) will be installed around jurisdictional areas and designated as Environmental Sensitive Areas (ESAs) to be preserved. ESAs will extend from the end of the permitted area to the edge of the construction footprint (within existing and proposed ROW and also within any temporary construction easements) to preserve all other waters of the U.S./State that are not otherwise permitted in accordance with BIO-3.

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