

BIOLOGICAL ENVIRONMENT

3.16 Wetlands and Other Waters

3.16.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 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 (water-loving) vegetation, wetland hydrology, and hydric soils (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 the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The 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 U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the

USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practical alternative (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 the Department, 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 the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB) and the California Department of Fish and Wildlife (CDFW). 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 California Fish and Game Code 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 the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the 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 Waste Discharge Requirements (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 which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see Water Quality Section 3.8 for more details.

3.16.2 Affected Environment

The information in this section is based on the *Natural Environment Study* (NES; December 2015), the *Supplemental Natural Environment Study* (Supplemental NES; April 2016), and the *Jurisdictional Delineation Report* (May 2015) for the Proposed Project. The *Jurisdictional Delineation Report*, which was prepared in accordance with current USACE and CDFW criteria, is provided in Appendix G of the NES.

The Study Area that is assessed for biological resources is referred to as the Biological Study Area (BSA). The description of the BSA was discussed in Section 3.15, and shown on Figure 3.15.1.

On December 3, 2013, a field investigation of the drainage features in the BSA along SR-241 and SR-91 was conducted. Features along SR-241 were delineated according to the USACE three-parameter (vegetation, soils, and hydrology) method of wetlands delineation (1987 Corps of Engineers *Wetland Delineation Manual*; 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*), as well as CDFW guidelines. At the same time, the features along SR-91 were checked for comparison with results for the part of the BSA that overlaps with the 2009 jurisdictional delineation that was part of the SR-91 Corridor Improvement Project. Nine drainages were identified within the BSA and are referred to by location (Locations 1 through 9). The nine locations are depicted on Figure 3.15.1 (Sheets 4, 5, 6, 7, 8, and 9), provided earlier in Section 3.15, Natural Communities.

All channelized storm water from the BSA eventually discharges into the Santa Ana River. The Santa Ana River is within the 1,840-square mile Santa Ana River Hydrologic Unit, in the counties of Orange, San Bernardino, and Riverside. The Santa Ana River extends approximately 96 miles from its headwaters in the San Bernardino Mountains, to where it drains into the Pacific Ocean between the south end of Huntington State Beach and the north end of the City of Newport Beach. In the vicinity of the BSA, the Santa Ana River parallels SR-91 and then State Route 55 (SR-55) through the cities of Yorba Linda, Anaheim, Orange, Fountain Valley, Costa Mesa, and Huntington Beach. The Santa Ana River, a traditional navigable water, meets the Pacific Ocean approximately 25 miles downstream from the BSA.

3.16.2.1 USACE Jurisdiction

Likely Non-jurisdictional Areas

The drainage features in the BSA are a mix of natural earthen bottom and concrete or riprap-lined channels. All of these drainages have been altered in some form or are

wholly human-made. According to USACE guidance, drainages may be excluded from CWA jurisdiction if they are excavated wholly in and drain only upland areas, do not carry Relatively Permanent Water, or are low-volume swales.

Three drainage systems (Locations 1, 2, and 7) within the project limits are likely non-jurisdictional under USACE because the USACE typically does not assert jurisdiction over nontidal drainages and ditches that are excavated on dry land, drain adjacent upland areas, and do not convey relatively permanent flow. Locations 1 (asphalt-lined swale, Sheet 4 of Figure 3.15.1), 2 (riprap-lined treatment pond/basin including two concrete v-ditches and two erosion rills, Sheets 4 and 5), and 7 (concrete v-ditch, Sheets 4 and 5) appear to have been created on dry land as part of the original permitted construction of SR-241 to drain the road surface and adjacent upland areas; however, these drainage systems do not convey relatively permanent flow. Therefore, it is expected that the USACE will not assert jurisdiction over these three drainage systems. Furthermore, per 33 CFR Section 328.3, waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m), which also meet the criteria of this definition) are not waters of the United States. Additionally, none of these potentially non-jurisdictional waters in the BSA would satisfy USACE wetland criteria should the USACE assert jurisdiction. The non-jurisdictional drainage systems (Locations 1, 2, and 7) total approximately 2,733 linear feet (0.52 mile) in the BSA.

One drainage system (Location 8, Sheets 6 and 7 of Figure 3.15.1) is part of an approved determination by the USACE, in which Location 8 was determined to be a non-jurisdictional drainage system. Location 8 is approximately 44.6 linear feet.

Potential Non-wetland Waters of the United States

There are five drainages (Locations 3, 4, 5, 6, and 9; Sheets 6, 7, 8 and 9 of Figure 3.15.1) where potential USACE jurisdictional non-wetland waters occur because they fit the criteria of being waters of the United States but do not meet the USACE three-parameter criteria for wetland determination (hydrophytic vegetation, hydric soils, and wetland hydrology requirements). Therefore, no wetland waters were observed in the BSA. As shown below in Table 3.16.1, Location 9 is outside of but adjacent to the BSA; therefore, the area at Location 9 is not included in the calculations; a total of 1.33 acres (ac) (Locations 3, 4, 5, and 6) meet the USACE requirements of jurisdictional non-wetland waters of the United States in the BSA.

**Table 3.16.1 Potential USACE Jurisdictional
Non-wetland Waters**

Drainage Location Number	Area (acres)
3	0.20
4	0.84
5	0.07
6	0.09
9	N/A
Total	1.20

Source: *Natural Environment Study* (December 2015).

¹ Location 9 is outside, but adjacent to, the BSA. The area is not included in the calculations.

BSA = biological study area

N/A = not applicable

USACE = United States Army Corps of Engineers

These drainages connect directly or indirectly to the Santa Ana River. The Santa Ana River has a relatively permanent (at least 3-month) flow during the year that eventually flows into the Pacific Ocean, a traditional navigable water. These drainages appear natural or appear to function in a capacity of more than just a storm drain and are believed to be potentially jurisdictional. However, because these drainages do not carry a relatively permanent flow, a significant nexus determination by the USACE will be required. The locations of these drainages are shown on Figure 3.15.1 (Sheets 6, 7, and 8).

3.16.2.2 CDFW Jurisdiction

All the areas satisfying the USACE jurisdictional criteria for waters of the United States (Locations 3, 4, 5, 6, and 9¹) are also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Drainages believed not to be jurisdictional by the USACE but which have an earthen bottom and some vegetation are believed to have some minimal value to wildlife and are likely subject to CDFW jurisdiction. In addition, streambed banks extending beyond the limits of USACE jurisdiction are considered subject to CDFW jurisdiction.

Location 9 is outside of but adjacent to the BSA; therefore, the area at Location 9 is not included in the calculations. The total acreage of CDFW jurisdiction within the BSA is 2.37 ac (Locations 3, 4, 5, and 6), which exceeds the total area delineated as USACE jurisdiction (i.e., 1.20 ac) by 1.46 ac. As shown in Table 3.16.2, a total of

¹ Location 9 is outside, but adjacent to, the BSA.

**Table 3.16.2 Potential CDFW
Jurisdictional Areas**

Drainage Location Number	Total CDFW Jurisdiction (acres)
3	0.51
4	1.46
5	0.28
6	0.12
9 ¹	N/A
Total	2.37

Source: *Natural Environment Study* (December 2015).

¹ Location 9 is outside, but adjacent to, the BSA. The area is not included in the calculations.

BSA = biological study area

CDFW = California Department of Fish and Wildlife

N/A = not applicable

2.37 ac meet the CDFW requirements of jurisdictional waters within the BSA. CDFW non-jurisdictional areas are the same as those for the USACE. The locations of these drainages are also shown on Figure 3.15.1.

3.16.2.3 RWQCB Jurisdiction

Since there is no public guidance on determining RWQCB jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands (three-parameter) and other waters of the United States. (i.e., ordinary high water mark). Whether or not they are determined to be jurisdictional by the USACE, the RWQCB can assert jurisdiction of these areas under the State Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and they are consequently included in the total RWQCB jurisdiction.

The total acreage of RWQCB jurisdiction within the BSA is the same as USACE (1.20 ac) (refer to Table 3.16.1). Similar to the USACE, the RWQCB asserts jurisdiction over roadside drainage ditches on a case-by-case basis.

3.16.2.4 Functions and Values

The following is a qualitative assessment of the functions and values attributable to the nine drainages in the BSA. All wetlands and other waters have some degree of functionality, and no single wetland can perform all of the functions considered below. The following functions are analyzed at low, moderate, or high value levels. Each drainage is analyzed based on the criteria described below.

Hydrologic Regime

This function is the ability of a wetland or stream to absorb and store water belowground. The degree of this saturation is dependent on the soil composition and is affected by prior flooding events. For example, clay soils possess more pore space than sandy soils. However, the smaller pore size slows the rate at which water is absorbed and released; therefore, clay soil has a lower capacity to store water than sandy soils. The storage of water below ground allows for the fluctuation between anaerobic and aerobic conditions that benefit environmental conditions necessary for microbial cycling.

Flood Storage and Flood Flow Modification

This function is determined based on the ability of a wetland or stream at which the peak flow in a watershed can be attenuated during major storm events and during peak domestic flows to take in surface water that may otherwise cause flooding. This is dependent on the size of the wetland or stream, the amount of water it can hold, and the location in the watershed. For instance, larger wetlands or streams that have a greater capacity to receive waters have a greater ability to reduce flooding. In addition, areas high in the watershed may have more ability to reduce flooding in downstream areas, but areas lower in the watershed may have greater benefits to a specific area. Vegetation, shape, and the configuration of the wetland or stream may also affect flood storage by dissipating the energy of flows during flood events.

Sediment Retention

Removal of sediment is the process that keeps sediments from migrating downstream. This is accomplished through the natural process of sediment retention and entrapment. This function is dependent on the sediment load being delivered by runoff into the watershed. Similar to above, the vegetation, shape, and configuration of a wetland will also affect sediment retention if water is detained for long durations, as would be the case with dense vegetation, a bowl-shaped watershed, or slow-moving water. This function would be demonstrated (i.e., high) if the turbidity of the incoming water is greater than that of the outgoing water.

Nutrient Retention and Transformation

Nutrient cycling consists of two variables: uptake of nutrients by plants and detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive with regard to nutrients than upland habitats. The regular availability of water associated with the wetland or stream may cause the growth of plants (nutrient uptake) and associated detritivores and generate

nutrients that may be utilized by a variety of aquatic and terrestrial wildlife downstream.

Toxicant Trapping

The major processes by which wetlands and streams remove nutrients and toxicants are as follows: (1) by trapping sediments rich in nutrients and toxicants, (2) by absorption to soils high in clay content or organic matter, and (3) through nitrification and denitrification in alternating oxic and anoxic conditions. Removal of nutrients and toxicants is closely tied to the processes that provide for sediment removal.

Social Significance

This is a measure of the probability that a wetland or stream will be utilized by the public because of its natural features, economic value, official status, and/or location. This includes being utilized by the public for recreational uses, such as boating, fishing, birding, walking, and other passive recreational activities. In addition, a wetland or stream that is utilized as an outdoor classroom, is a location for scientific study, or is near a nature center would have a higher social significance standing.

Wildlife Habitat

General habitat suitability is the ability of a wetland or stream to provide habitat for a wide range of wildlife. Vegetation is a large component of wildlife habitat. As plant community diversity increases along with connectivity with other habitats, so does potential wildlife diversity. In addition, a variety of open water, intermittent ponding, and perennial ponding are also important habitat elements for wildlife.

Aquatic Habitat

The ability of a wetland or stream to support aquatic species requires that there be ample food supply, pool and riffle complexes, and sufficient soil substrate. Food supply is typically in the form of aquatic invertebrates and detrital matter from nearby vegetation. Pool and riffle complexes provide a variety of habitats for species diversity as well as habitat for breeding and rearing activities. Species diversity is directly related to the complexity of the habitat structure.

Existing Functions and Values

The functions and values of the nine drainages in the BSA are analyzed in Table 3.16.3 based on the criteria outlined above. As shown in Table 3.16.3, the majority of these drainages evaluated were determined to have low values for all functions.

Table 3.16.3 Functions and Values of Drainages in the BSA

Drainage Number¹	Hydrologic Regime	Flood Storage and Flood Flow Modification	Sediment Retention	Nutrient Retention and Transformation	Toxicant Trapping	Social Significance	Wildlife Habitat	Aquatic Habitat
1	Low	Low	Low	Low	Low	Low	Low	Low
2	Low	Moderate	Low	Low	Low	Low	Low	Low
3	Low	Low	Low	Low	Low	Low	Low	Low
4	Low	Low	Low	Low	Low	Low	Low	Low
5	Low	High	Low	Low	Low	Low	Low	Low
6	Low	Low	Low	Low	Low	Low	Low	Low
7	Low	Low	Low	Low	Low	Low	Low	Low
8	Low	High	Low	Low	Low	Low	Low	Low
9	Low	Low	Low	Low	Low	Low	Low	Low

Source: *Jurisdictional Delineation Report* (May 2015) in Appendix F of the *Natural Environmental Study* (December 2015).

¹ Refer to Figure 3.15.1 in Section 3.15 for the locations of these drainages in the BSA.

BSA = biological study area

3.16.3 Environmental Consequences

The discussions regarding the potential temporary and permanent project impacts on jurisdictional and non-jurisdictional waters in the following sections should be considered preliminary until verified by the USACE, the CDFW, and the RWQCB.

3.16.3.1 Temporary Impacts

Build Alternative (Two-Lane Express Lanes Connector) (Preferred Alternative)

USACE Jurisdictional and Non-jurisdictional Areas

The Build Alternative would affect waters of the United States as a result of relocating, upgrading, constructing, or otherwise improving drainages and culverts to accommodate the Proposed Project. These impacts are shown on Figure 3.15.2.

Table 3.16.4 shows the temporary direct effects of the Build Alternative to USACE jurisdictional non-wetland waters and USACE non-jurisdictional areas inside and outside Caltrans right-of-way. The Build Alternative would result in less than 0.53 ac of temporary impacts to non-wetland USACE waters at Locations 3, 4, 5, and 6 inside Caltrans right-of-way and less than 0.01 ac of temporary impacts at Location 5 outside Caltrans right-of-way.

Table 3.16.4 Potential Temporary Impacts to USACE Jurisdictional Non-Wetland Waters

Drainage Location Number	Jurisdictional Status	Potential Temporary Jurisdictional Impacts	
		Inside Caltrans Right-of-Way	Outside Caltrans Right-of-Way
1	Non-jurisdictional ¹	--	--
2	Non-jurisdictional ¹	--	--
3	Jurisdictional	<0.01	0.00
4	Jurisdictional	0.43	0.00
5	Jurisdictional	0.00	<0.01
6	Jurisdictional	0.09	0.00
7	Non-jurisdictional ¹	--	--
8	Approved Non-jurisdictional ¹	--	--
9 ²	N/A	--	--
Total		<0.53	<0.01

Source: *Natural Environment Study* (December 2015).

¹ These features are likely non-jurisdictional since they are concrete channels, v-ditches, or swales for carrying freeway runoff. Therefore, specific impact acres were not shown (—) for these features.

² Feature 9 is outside of/adjacent to the BSA and is therefore not shown.

BSA = biological study area

N/A = not applicable

USACE = United States Army Corps of Engineers

Temporary impacts are expected to occur at USACE non-jurisdictional Locations 1, 2, 7, and 8, totaling approximately 2,282 total linear feet (0.43 mile) inside Caltrans right-of-way.

In addition to the direct impacts to potential jurisdictional waters listed in Table 3.16.4, there is some potential for associated indirect impacts to functions and values to the adjacent portions of these drainages, as well as downstream areas. However, the current functions of these drainages are quite low (refer to Table 3.16.3), and the impacts would be minimal. While only direct impacts are specifically regulated by the USACE, the indirect impacts of any fill in jurisdictional drainages will be considered by the USACE pursuant to their standard procedure for determining mitigation ratios. Other indirect effects to jurisdictional waters from construction activities in adjacent upland areas are expected to be minimal, based on the erosion control measures required during construction.

Impacts to USACE jurisdictional areas would require authorization from the USACE prior to construction as specified in Measure WET-1. Avoidance, minimization, and/or compensatory mitigation would be determined during the permit process. With implementation of Measure WET-1, which requires a permit from the USACE in accordance with Section 404 of the Clean Water Act, temporary impacts to USACE jurisdictional non-wetland waters would not be adverse.

CDFW Jurisdictional Areas

The Build Alternative would affect CDFW jurisdictional areas as a result of relocating, upgrading, constructing, or otherwise improving drainages and culverts to accommodate the Proposed Project.

Table 3.16.5 shows the direct temporary impacts to CDFW jurisdictional areas inside and outside Caltrans right-of-way. The Build Alternative would result in approximately 1.01 ac of temporary impacts to CDFW jurisdictional areas at Locations 3, 4, 5, and 6 inside Caltrans right-of-way and approximately 0.03 ac of temporary impacts at Location 5 outside Caltrans right-of-way. These impacts are also shown on Figure 3.15.2.

As with the impacts to USACE jurisdictional areas, indirect impacts are expected to be minimal, and will be considered by the CDFW in developing any mitigation requirements.

Table 3.16.5 Temporary Impacts to CDFW Jurisdictional Areas

Drainage Location Number	Jurisdictional Status	Temporary Jurisdictional Impacts	
		Inside Caltrans Right-of-Way	Outside Caltrans Right-of-Way
1	Non-jurisdictional ¹	--	--
2	Non-jurisdictional ¹	--	--
3	Jurisdictional	0.05	0.00
4	Jurisdictional	0.84	0.00
5	Jurisdictional	0.00	0.03
6	Jurisdictional	0.12	0.00
7	Non-jurisdictional ¹	--	--
8	Approved Non-jurisdictional ¹	--	--
9 ²	N/A	--	--
Total		1.01	0.03

Source: *Natural Environment Study* (December 2015).

¹ These features are likely non-jurisdictional since they are concrete channels, v-ditches, or swales for carrying freeway runoff. Therefore, specific impact acres were not shown (—) for these features.

² Feature 9 is outside of/adjacent to the BSA and is, therefore, not shown.

BSA = biological study area

CDFW = California Department of Fish and Wildlife

N/A = not applicable

Impacts to CDFW jurisdictional areas would require authorization from the CDFW prior to construction as specified in Measure WET-2. Avoidance, minimization, and/or compensatory mitigation would be determined during the permit process. With implementation of Measure WET-2, which requires a Streambed Alteration Agreement from CDFW, temporary impacts to CDFW jurisdictional areas would not be adverse.

RWQCB Jurisdictional Areas

The temporary impacts to RWQCB jurisdictional areas would be the same as the impacts to USACE jurisdictional areas shown in Table 3.16.4. As such, the Build Alternative would result in less than 0.53 ac of temporary impacts to RWQCB jurisdictional areas at Locations 3, 4, 5, and 6 inside Caltrans right-of-way and less than 0.01 ac of temporary impacts at Location 5 outside Caltrans right-of-way.

Impacts to RWQCB jurisdictional areas would require authorization from the Santa Ana RWQCB prior to construction as specified in Measure WET-3. Specific requirements or conditions would be determined during the permit process. With implementation of Measure WET-3, which requires a Section 401 Water Quality Certification from the RWQCB, temporary impacts to RWQCB jurisdictional areas would not be adverse.

No Build Alternative

The No Build Alternative does not include any improvements to SR-241 or SR-91 in the BSA; therefore, no temporary impacts to wetlands or other waters would occur.

3.16.3.2 Permanent Impacts

Build Alternative (Two-Lane Express Lanes Connector) (Preferred Alternative)

USACE Jurisdictional and Non-jurisdictional Areas

The Build Alternative would result in approximately 0.45 ac of permanent impacts to USACE jurisdictional non-wetland waters at Locations 4 and 5 inside Caltrans right-of-way and approximately 0.02 ac of permanent impacts at Location 5 outside Caltrans right-of-way. See Table 3.16.6, below. Permanent impacts to USACE jurisdictional areas are shown on Figure 3.15.2.

Table 3.16.6 Permanent Impacts to USACE Jurisdictional Non-Wetland Waters

Drainage Location Number	Jurisdictional Status	Permanent Jurisdictional Impacts	
		Inside Caltrans Right-of-Way	Outside Caltrans Right-of-Way
1	Non-jurisdictional ¹	--	--
2	Non-jurisdictional ¹	--	--
3	Jurisdictional	0.00	0.00
4	Jurisdictional	0.41	0.00
5	Jurisdictional	0.04	0.02
6	Jurisdictional	0.00	0.00
7	Non-jurisdictional ¹	--	--
8	Approved Non-jurisdictional ¹	--	--
9 ²	N/A	--	--
Total		0.45	0.02

Source: *Natural Environment Study* (December 2015).

¹ These features are likely non-jurisdictional since they are concrete channels, v-ditches, or swales for carrying freeway runoff. Therefore, specific impact acres were not shown (—) for these features.

² Feature 9 is outside of/adjacent to the BSA and is, therefore, not shown.

BSA = biological study area

N/A = not applicable

USACE = United States Army Corps of Engineers

Impacts to USACE jurisdictional areas would require authorization from the USACE prior to construction as specified in Measure WET-1. Avoidance, minimization, and/or compensatory mitigation would be determined during the permit process. With implementation of Measure WET-1, which requires a nationwide permit from the USACE in accordance with Section 404 of the Clean Water Act, permanent impacts to USACE jurisdictional non-wetland waters would not be adverse.

CDFW Jurisdictional Areas

The Build Alternative would result in approximately 0.66 ac of permanent impacts to CDFW jurisdictional areas at Locations 4 and 5 inside Caltrans right-of-way and approximately 0.20 ac of permanent impacts at Location 5 outside Caltrans right-of-way. See Table 3.16.7, below. Permanent impacts to CDFW jurisdiction are shown on Figure 3.15.2.

Table 3.16.7 Permanent Impacts to CDFW Jurisdictional Areas

Drainage Location Number	Jurisdictional Status	Permanent Jurisdictional Impacts	
		Inside Caltrans Right-of-Way	Outside Caltrans Right-of-Way
1	Non-jurisdictional ¹	--	--
2	Non-jurisdictional ¹	--	--
3	Jurisdictional	0.00	0.00
4	Jurisdictional	0.62	0.00
5	Jurisdictional	0.04	0.20
6	Jurisdictional	0.00	0.00
7	Non-jurisdictional ¹	--	--
8	Approved Non-jurisdictional ¹	--	--
9 ²	N/A	--	--
Total		0.66	0.20

Source: *Natural Environment Study* (December 2015).

¹ These features are likely non-jurisdictional since they are concrete channels, v-ditches, or swales for carrying freeway runoff. Therefore, specific impact acres were not shown (—) for these features.

² Feature 9 is outside of/adjacent to the BSA and is, therefore, not shown.

BSA = biological study area

CDFW = California Department of Fish and Wildlife

N/A = not applicable

Impacts to CDFW jurisdictional areas would require authorization from CDFW prior to construction as specified in Measure WET-2. Avoidance, minimization, and/or compensatory mitigation would be determined during the permit process. With implementation of Measure WET-2, which requires a Streambed Alteration Agreement from CDFW, permanent impacts to CDFW jurisdictional areas would not be adverse.

RWQCB Jurisdictional Areas

The permanent impacts to RWQCB jurisdictional areas would be the same as the impacts to USACE jurisdictional areas shown in Table 3.16.6. As such, the Build Alternative would result in approximately 0.45 ac of permanent impacts to RWQCB jurisdictional areas at Locations 4 and 5 inside Caltrans right-of-way and approximately 0.02 ac of permanent impacts at Location 5 outside Caltrans right-of-way.

Impacts to RWQCB jurisdictional areas would require authorization from the Santa Ana RWQCB prior to construction as specified in Measure WET-3. Avoidance, minimization, and/or compensatory mitigation would be determined during the permit process. With implementation of Measure WET-3, which requires a Section 401 Water Quality Certification from the RWQCB, permanent impacts to RWQCB jurisdictional areas would not be substantial.

No Build Alternative

The No Build Alternative does not include any improvements to SR-241 or SR-91 in the BSA; therefore, no permanent impacts to wetlands or other waters would occur.

3.16.4 Avoidance, Minimization, and/or Mitigation Measures

The measures below would avoid, minimize, and/or mitigate impacts to wetlands and other waters.

- Measure WET-1** **Nationwide Permit.** Prior to initiation of construction, a permit will be obtained through the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. As part of coordination with the USACE, a Nationwide Permit will be pursued, if appropriate.
- Measure WET-2** **Streambed Alteration Agreement.** Prior to initiation of construction, a Streambed Alteration Agreement (SAA) with the California Department of Fish and Wildlife will be obtained and any specifications in the SAA will be implemented.
- Measure WET-3** **Water Quality Certification.** Prior to initiation of construction, a Section 401 Water Quality Certification from the Santa Ana Regional Water Quality Control Board will be obtained and any specifications in the Certification will be implemented.

ETC Final EIR and Final EIS

Measure B-13 *In conjunction with final design, the TCA shall, to the extent feasible, construct stream bank reinforcements of ungrouted riprap gabions or other appropriate material at the shallowest possible slope (2:1 or less), allowing for the replacement of soil and the subsequent revegetation of these areas with riparian plant species.*