

## **2.14 Wetlands and Other Waters**

### **2.14.1 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. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. 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 Individual. There are two types of General permits: Regional and Nationwide. 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 Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 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 practicable 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 California Department of Transportation (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 project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) 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 Section 2.8, Water Quality and Stormwater Runoff, for more details.

### **2.14.2 Affected Environment**

The information presented in this section was compiled from two technical reports prepared in 2017 and 2018, including the amended Natural Environment Study (NES) prepared for the *SR-133 Safety Improvement Project at El Toro Road* (EA 0N0600) and the NES prepared for the *SR-133 Widening and Drainage Improvement Project* (EA 0Q3600). Each of these documents has a corresponding *Jurisdictional Delineation Report*, which were conducted in accordance with current USACE and CDFW criteria and are provided in Appendix F of NES EA 0Q3600 and Appendix H of NES EA 0N0600.

The Jurisdictional Study Area (JSA) contains potentially jurisdictional waters that may be subject to regulation by the USACE, the RWQCB, and/or the CDFW. The discussions regarding jurisdictional waters in the following sections should be considered preliminary until verified by the USACE, the CDFW, and the RWQCB.

The project is located within the Laguna Coastal Streams Watershed, which is bound on the west by Emerald Canyon and on the east by the Aliso Creek Watershed. The total area of the watershed is approximately 19.35 square miles. This watershed originates at the northernmost section of the Laguna Coast Wilderness Park and ultimately flows into the Pacific Ocean.

Based on close examination of historical and recent aerial photography and fieldwork conducted for the project, several potentially jurisdictional drainages were identified in the direct disturbance limits of the Build Alternative. It should be noted that these drainages are currently subjected to ongoing disturbances associated with ongoing SR-133 operations (i.e., dust, runoff, litter, routine mowing and tree trimming, etc.). Potential jurisdictional drainages delineated within the JSA include Drainages 1 through 4, Drainage 9, and Feature 4. These drainage features are located on the east and west sides of State Route 133 (SR-33) (see Figure 2.14-1, Potential Jurisdictional Features) and are described below.

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LEGEND

Project Location

Permanent Impact Area

Temporary Impact Area

BSA Mapped by LSA for the SR-133 Widening and Drainage Improvement Project (EA 0Q3600)

BSA Mapped by ICF for the SR-133 Safety Improvement Project (EA 0N0600)

Coastal Zone Boundary

Jurisdictional Drainage Features

Non-Jurisdictional Feature

Waters of US Jurisdiction

Non Wetland Waters of US

Wetland Waters of US

CDFW Jurisdiction

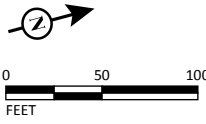
Unvegetated Streambed

Vegetated Streambed and Associated Riparian

FIGURE 2.14-1

Sheet 1 of 4

SR-133 Improvement Project  
Jurisdictional Resources within the BSA  
12-ORA-133 PM 3.1/R4.1  
EA 0P94U





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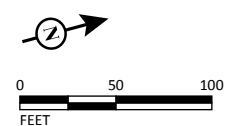




# LEGEND

- Project Location
- Permanent Impact Area
- Temporary Impact Area
- BSA Mapped by LSA for the SR-133 Widening and Drainage Improvement Project (EA 0Q3600)
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- Coastal Zone Boundary
- Jurisdictional Drainage Features
- Non-Jurisdictional Feature
- Waters of US Jurisdiction
- Non Wetland Waters of US
- Wetland Waters of US
- CDFW Jurisdiction
- Unvegetated Streambed
- Vegetated Streambed and Associated Riparian



SOURCE: Bing Maps (2015); Caltrans (10/2017, 3/2018, 9/2018)

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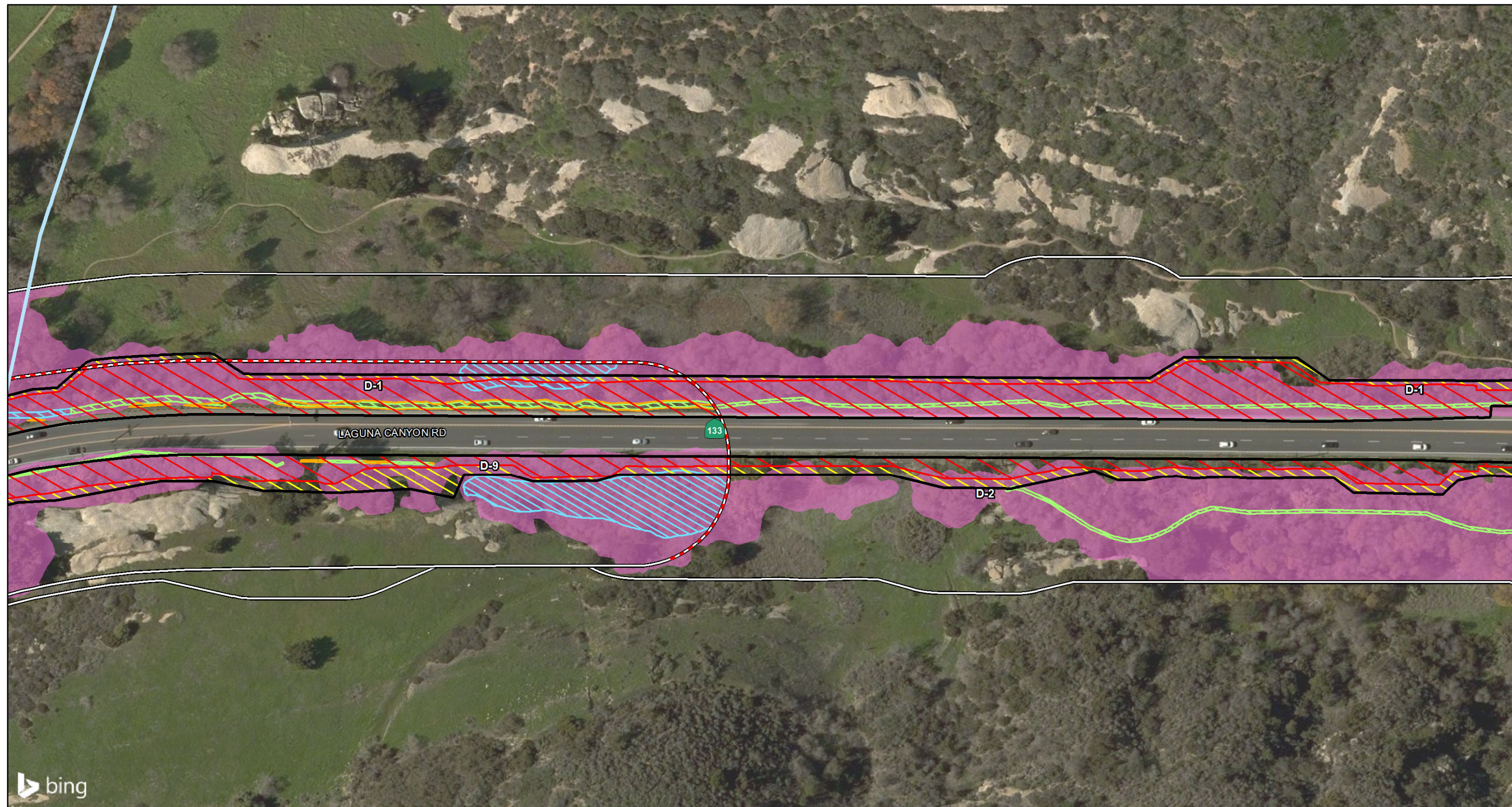
FIGURE 2.14-1  
Sheet 2 of 4

SR-133 Improvement Project  
Jurisdictional Resources within the BSA  
12-ORA-133 PM 3.1/R4.1  
EA 0P94U



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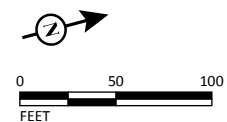


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- Coastal Zone Boundary
- Jurisdictional Drainage Features**
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- Waters of US Jurisdiction**
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SOURCE: Bing Maps (2015); Caltrans (10/2017, 3/2018, 9/2018)

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FIGURE 2.14-1  
Sheet 3 of 4

SR-133 Improvement Project  
Jurisdictional Resources within the BSA  
12-ORA-133 PM 3.1/R4.1  
EA 0P94U



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FIGURE 2.14-1  
Sheet 4 of 4

**LEGEND**

- Project Location
- Permanent Impact Area
- Temporary Impact Area
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Coastal Zone Boundary

**Jurisdictional Drainage Features**

- Non-Jurisdictional Feature

**Waters of US Jurisdiction**

- Non Wetland Waters of US
- Wetland Waters of US

**CDFW Jurisdiction**

- Unvegetated Streambed
- Vegetated Streambed and Associated Riparian



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Drainage 1 (D-1) is a naturally occurring drainage feature (commonly referred to as Laguna Canyon Creek) that conveys ephemeral flows on the west side of SR-133. The north portions of the drainage within the JSA consist of a compound channel formed by extreme, brief, ephemeral flows; eventually the south portion of the drainage within the JSA becomes channelized, forming a single-thread channel. At the south end of this drainage feature, Drainage 1 goes (east) into a culvert under Laguna Canyon Road, where it continues southeast as a single-thread channel into another culvert under El Toro Road and continues south from El Toro Road, passing through the eastern portion of the JSA once more.

Drainage 2 (D-2) comprises a concrete v-ditch, open box culvert, and earthen drainage. The north portion of the drainage is concrete-lined and becomes earthen to the south. The concrete channel and earthen drainage receive ephemeral stormwater runoff. The earthen portion of the drainage is a compound drainage that develops into a swale.

Drainage 3 (D-3) is an earthen drainage that has developed as a result of ephemeral upland water runoff from the surrounding hillsides. The drainage is located east of Drainage 2 and conveys ephemeral flows from north to south. This drainage contains an OHWM and is tributary to Drainage 2, which has potential to be tributary to Drainage 9, which is tributary to Drainage 1, which conveys ephemeral flow to the Pacific Ocean.

Drainage 3A (D-3A) is an earthen drainage that has developed as a result of ephemeral upland water runoff from the surrounding hillside. This drainage conveys ephemeral flows east to west, contains an OHWM, and is tributary to Drainage 2, which has potential to be tributary to Drainage 9, which is tributary to Drainage 1, which conveys ephemeral flows to the Pacific Ocean.

Drainage 4 (D-4) is an earthen drainage that conveys ephemeral flows during and immediately after storm events. This drainage contains an OHWM, and is tributary to Drainage 1, which conveys ephemeral flow to the Pacific Ocean.

Drainage 9 (D-9) is an existing earthen drainage that conveys ephemeral flows during and immediately after storm events. This drainage contains an OHWM, and is tributary to Drainage 1, which conveys ephemeral flow to the Pacific Ocean. This drainage is delineated as “Feature 3” in the *SR-133 Safety Improvement Project at El Toro Road Jurisdictional Delineation Report* (EA 0N0600).

Feature 4 is an erosional ephemeral drainage that conveys flows west to east toward SR-133. OHWM indicators observed included change in vegetation species, change in vegetation cover, and break in bank slope.

Potential drainage areas were assessed in the field and determined to be non-jurisdictional due to the lack of an OHWM or they consisted of corrugated metal pipes (CMPs) that only conveyed ephemeral stormwater flows. Several non-jurisdictional features were assessed in the JSA. These areas are manmade drainages that did not displace previously existing natural drainage channels and are wholly in and draining only uplands that do not convey at least a relatively permanent flow of water or have an OHWM (refer to the *Jurisdictional Delineation Reports* for further descriptions of these features).

#### **2.14.2.1 USACE Jurisdictional Areas**

Based on the results of the *Jurisdictional Delineation Reports*, areas subject to potential USACE jurisdiction pursuant to Section 404 of the CWA include Drainages D-1, D-2, D-3, D-3A, D-4, D-9, and Feature 4. These drainage features have an OHWM, and during extreme storm events, have the potential to be tributary to San Juan Creek (D-25), which is tributary to the Pacific Ocean (a traditionally navigable water [TNW]). The USACE does not generally assert jurisdiction over drainages that do not convey a relatively permanent flow of water, do not have an OHWM, and are isolated drainages. Therefore, the remaining drainages observed in the JSA, which do not convey a relatively permanent flow of water, do not have an OHWM, and/or are isolated drainages, would not be considered subject to USACE jurisdiction.

Drainages D-1, D-2, D-3, D-3A, D-4, D-9, and Feature 4 comprise 0.79 acre of non-wetland waters and 0.42 acre of wetland waters, for a total of 1.21 acres of delineated waters of the U.S. within the JSA potentially subject to USACE jurisdiction.

#### **2.14.2.2 RWQCB Jurisdictional Areas**

There is no public guidance on determining RWQCB jurisdictional areas. For this study, RWQCB jurisdiction was determined based on the federal definition of wetlands (three-parameters) and the OHWM of other waters of the U.S. Since there are areas within the JSA subject to USACE and CDFW jurisdiction, RWQCB jurisdiction in this case is coincident with USACE jurisdiction for purposes of Section 401 certification. The total area of potential RWQCB jurisdiction within the JSA is the same as the USACE jurisdiction (i.e., 1.21 acre).



### **2.14.2.3 CDFW Jurisdictional Areas**

All the areas satisfying the USACE jurisdictional criteria for waters of the U.S. are also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. CDFW jurisdiction in the JSA is associated with Drainages D-1, D-2, D-3, D-3A, D-4, D-9, and Feature 4. These drainages have either a defined channel bed and bank and/or associated riparian vegetation. A total of 11.62 acres in the JSA are subject to CDFW jurisdiction.

### **2.14.3 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.

#### **2.14.3.1 Temporary Impacts**

##### ***Alternative 1 (Build Alternative)***

Construction activities associated with the Build Alternative that would result in direct and indirect temporary effects to delineated jurisdictional features include construction staging and access areas and/or areas of temporary ground disturbance. All direct effects to delineated features are presented in Table 2.14.1.

Construction of the Build Alternative would result in temporary direct effects to 0.008 acre of delineated USACE non-wetland waters and 0.025 acre of delineated USACE wetland waters. The areas subject to RWQCB jurisdiction coincide with those subject to USACE jurisdiction (0.033 acre in total). Construction of the Build Alternative would result in temporary direct effects to 0.001 acre of unvegetated streambed and 0.68 acre of associated riparian habitat (vegetated streambed) under delineated CDFW jurisdiction.

Measures BIO-1 through BIO-11, provided in Section 2.13, Natural Communities, would avoid and/or minimize temporary indirect impacts to delineated jurisdictional features by (1) designating Environmentally Sensitive Areas (ESAs) that are to be preserved during construction, (2) restoring areas temporarily affected by construction activities, (3) utilizing best management practices (BMPs) to prevent construction runoff and dust from entering jurisdictional waters and minimizing fire risks, (4) preventing the spread of invasive species, (5) monitoring construction activities to ensure that practicable measures are being employed to avoid and minimize incidental disturbance to sensitive resources, (6) training all construction personnel regarding the applicable avoidance and minimization measures,

**Table 2.14.1 Delineated Jurisdictional Areas Impacted by the Build Alternative**

Jurisdiction Type	Permanent Impacts (acres)	Temporary Impacts (acres)	Total Impact (acres)
<b>USACE/RWQCB</b>			
<b>Non-Wetland Waters of the U.S.</b>			
Drainage 1	0.16	0.005	0.165
Drainage 2	-	0.0003	0.0003
Drainage 9 <sup>1</sup>	0.04	-	0.04
Drainage 4	0.005	0.002	0.007
Feature 4	-	0.001	0.001
<i>Total Non-Wetland Waters of the U.S.</i>	<i>0.205</i>	<i>0.008</i>	<i>0.213</i>
<b>Wetland Waters of the U.S.</b>			
Drainage 1	0.07	0.02	0.09
Drainage 9 <sup>1</sup>	-	0.005	0.005
<i>Total Wetland Waters of the U.S.</i>	<i>0.07</i>	<i>0.025</i>	<i>0.095</i>
<b>Total USACE / RWQCB</b>	<b>0.28</b>	<b>0.03</b>	<b>0.31</b>
<b>CDFW</b>			
<b>Unvegetated Streambed</b>			
Drainage 1	0.08	-	0.08
Drainage 9 <sup>1</sup>	0.009	-	0.009
Feature 4	-	0.001	0.001
<i>Total Unvegetated Streambed</i>	<i>0.089</i>	<i>0.001</i>	<i>0.09</i>
<b>Associated Riparian Vegetation</b>			
Drainage 1	1.52	0.29	1.81
Drainage 2	0.08	0.15	0.23
Drainage 4	0.05	0.05	0.10
Drainage 9 <sup>1</sup>	0.42	0.19	0.61
<i>Total Associated Riparian Vegetation (Vegetated Streambed)</i>	<i>2.07</i>	<i>0.68</i>	<i>2.75</i>
<b>Total CDFW</b>	<b>2.16</b>	<b>0.68</b>	<b>2.84</b>

Note: Drainage 9 is delineated as "Feature 3" in the SR-133 Safety Improvement Project at El Toro Road Jurisdictional Delineation Report (EA 0n0600)

Note: Totals under each jurisdiction are rounded to two decimal places.

CDFW = California Department of Fish and Wildlife

RWQCB = Regional Water Quality Control Board

USACE = United States Army Corps of Engineers

(7) avoiding retained oak tree root zones, (8) monitoring retained oak trees, (9) pruning oak trees in accordance with International Society of Arboriculture (ISA) standards, (10) replacing oak trees in compliance with State Senate Concurrent Resolution No. 17, and (11) restoring temporarily impacted riparian habitats with native species. The implementation of Measures BIO-1 through BIO-11 would avoid, minimize, and/or mitigate for temporary effects to jurisdictional areas.

### **Alternative 2 (No Build Alternative)**

The No Build Alternative would not include construction of any of the project improvements. Therefore, the No Build Alternative would not result in adverse temporary effects to USACE, CDFW, or RWQCB areas in the JSA. Existing effects



associated with the operation of SR-133 (discussed in Section 2.14.2) would continue under the No Build Alternative.

### **2.14.3.2 Permanent Impacts**

#### ***Alternative 1 (Build Alternative)***

Construction of the Build Alternative would result in permanent effects to delineated jurisdictional drainages within the JSA associated with vegetation clearing and grubbing, remediating the base soil form, pouring the concrete check dam, slope grading, roadway demolition and excavation, undergrounding utilities, roadway structural work and paving, and constructing the articulated block channel (refer to Table 2.14.1).

As shown in Table 2.14.1, implementation of the Build Alternative would result in permanent direct effects to 0.205 acre of delineated USACE non-wetland waters and 0.07 acre of delineated USACE wetland waters. As noted earlier, the areas subject to RWQCB jurisdiction coincide with those subject to USACE jurisdiction (0.275 acre in total). The Build Alternative would result in permanent direct effects to 0.089 acre of unvegetated streambed and 2.07 acre of associated riparian habitat under delineated CDFW jurisdiction. Permanent effects to wetlands and riparian communities will be mitigated with implementation of Measure BIO-11, provided in Section 2.13, Natural Communities. In July 2018, Caltrans conducted an assessment of potential riparian mitigation and planting areas within the project watershed (e.g., within Laguna Canyon and within adjacent OC Parks-managed lands). Several riparian/wetland creation and enhancement sites have been preliminarily identified as being potentially suitable for riparian and wetland compensatory mitigation. The boundaries of all potential mitigation and planting areas identified are subject to alterations based on stakeholder input (including landowner and resource agency approvals), as well as further technical analyses to determine the feasibility of any given site (e.g., soil and hydrology studies, and engineering constraints analyses, etc.). Therefore, Caltrans proposes to mitigate project-related impacts to jurisdictional features (including wetlands and riparian habitats) within the project watershed, where feasible. Figure 2.13-3, provided in Section 2.13, Natural Communities, provides an overview of the potential mitigation and planting areas identified within the project watershed. If additional mitigation acreage is required, Caltrans proposes that permanent effects will be mitigated off-site at a 3:1 ratio by purchasing mitigation credits from the San Luis Rey Mitigation Bank. *The San Luis Rey Mitigation Bank is approved to provide mitigation for permitted projects under*

*USACE Section 404 permits, RWQCB Section 401 certifications, and CDFW 1600 streambed alteration agreements.*

### **Alternative 2 (No Build Alternative)**

The No Build Alternative would not include construction of any of the project improvements. Therefore, the No Build Alternative would not result in permanent effects to USACE, CDFW, or RWQCB areas in the JSA. Existing effects associated with the operation of SR-133 (as described in Section 2.14.2) would continue under the No Build Alternative.

#### **2.14.4 Avoidance, Minimization, and/or Mitigation Measures**

Measures BIO-1 through BIO-6 and BIO-11, provided in Section 2.13, Natural Communities, would avoid, minimize, and/or mitigate effects to wetlands and other waters.

#### **2.14.5 Wetlands Only Practicable Alternative Finding**

Section 404(b)(1) of the federal CWA requires projects involving federal action to demonstrate that measures have been taken to avoid and minimize impacts to waters of the United States, including wetlands. Furthermore, EO 11990 (Protection of Wetlands) directs federal agencies to “...avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands...”

The No Build Alternative would avoid impacts to jurisdictional areas; however, it would not meet the purpose and need for the proposed project and was not considered a practicable alternative.

The Build Alternative, which has been selected as the Preferred Alternative, impacts jurisdictional waters as described in Section 2.14.3 and summarized in Table 2.14.1. These impacts result from the shoulder widening, utility relocation, and modification of existing drainage features. Caltrans continues to work with the County of Orange, utility companies, and local stakeholders to refine the project design, which has reduced the overall direct impact area in several locales. One design modification for the Build Alternative that will avoid and/or minimize impacts to wetlands includes the proposal of an articulated block channel instead of a concrete block channel, allowing for greater rates of groundwater recharge. Decreased flow rates and increased detention that would result from the proposed check dam component have the potential to improve wetland/riparian conditions both upstream and downstream by reducing erosion rates and increasing the opportunity for ground water recharge.



Furthermore, to minimize impacts to landscaped riparian habitat, a large portion of the check dam will be constructed within existing riprap area. The Build Alternative has been determined to be practicable as it relates to cost, existing technology, logistics, and purpose and need. Due to the constraints associated with the project location (e.g., terrain/topography, adjacent preserved open space, and flooding risks associated with existing infrastructure and private properties), there are no practicable alternatives that would meet the project purpose and need and result in lesser impacts to wetlands.

Practicable measures have been included to avoid and minimize harm to wetlands and other waters of the United States as a result of the construction and operation of the Build Alternative. These measures include:

- Delineation of Environmentally Sensitive Areas (ESAs) (BIO-1)
- Restoration of Temporary Impacts to Native Vegetation (BIO-2)
- Best Management Practices (BMPs) During Construction (BIO-3)
- Invasive Species Control (BIO-4)
- Biological Monitoring (BIO-5)
- On-Site Trainings (BIO-6)
- Compensatory Mitigation for Riparian Habitats (BIO-11)

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands under the Build Alternative, and that the proposed project includes all practicable measures to minimize harm to wetlands that may result from such use.

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