3.17 WETLANDS

This section is based on the *Natural Environment Study* (NES) (January 2012) and the *Jurisdictional Delineation Report* (May 2012; Attachment E of the NES). Detailed discussions and maps of identified jurisdictional features are provided in the *Jurisdictional Delineation Report*.

3.17.1 REGULATORY SETTING

Wetlands and other waters are regulated under a number of laws and regulations. At the Federal level, the Clean Water Act (33 U.S.C. 1344 CWA) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States 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 Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can 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 administered by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (EPA).

USACE issues two types of 404 permits: Standard and General permits. Nationwide permits, a type of General permit, are issued to authorize 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. 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 CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with 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 USACE may not issue a permit if there is a LEDPA to the proposed discharge that would have less effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (E.O. 11990) also regulates the activities of Federal agencies with regard to wetlands. Essentially, this executive order states that a Federal agency, such as the Federal Highway Administration, 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 Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the 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, bank, or channel, of any river, stream or lake to notify CDFG before beginning construction. If CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFG 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 CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see Section 3.9, Water Quality, for additional details.

3.17.2 Affected Environment

3.17.2.1 USACE and CDFG Jurisdiction

Areas under the jurisdiction of the USACE differ from those under the jurisdiction of CDFG; therefore, the following text describes the basis of USACE and CDFG jurisdiction over various waters.

USACE jurisdiction extends laterally to the ordinary high water mark (OHWM) or beyond the OHWM to the limit of any adjacent wetlands, if present. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area.”

In this section, USACE jurisdictional areas are described as either wetland or nonwetland areas. The USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions." In order to satisfy the USACE wetland definition, an area must possess three wetland characteristics: (1) hydrophytic vegetation,[1] (2) hydric soils,[2] and (3) wetland hydrology.[3] Generally, nonwetland waters are those within the OHWM that are not wetlands.

CDFG regulates streams and rivers, which are defined by the presence of a channel, bed, and banks. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFG. CDFG has not defined wetlands for jurisdictional purposes. CDFG generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, alders, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFG jurisdiction based on riparian habitat will automatically include any wetland areas. Wetlands not associated with a lake, stream, or other regulated area are generally not subject to CDFG jurisdiction.

3.17.2.2 JURISDICTIONAL AREAS IN THE I-710 CORRIDOR BIOLOGICAL STUDY AREA

The biological study area (BSA) is approximately 18 linear miles along the Interstate 710 (I-710) corridor, from Ocean Blvd. to State Route 60 (SR-60). The BSA also includes a portion of Interstate 405 (I-405), State Route 91 (SR-91), Interstate 105 (I-105), and Interstate 5 (I-5), to accommodate for proposed interchange improvements. Additionally, the BSA includes improvements to 42 local arterial intersections to improve intersection operations. The entire I-710 Corridor Project BSA is located within the Los Angeles River Watershed, which has an overall size of 834 square miles (Los Angeles County Department of Public Works [LACDPW] 2009). The upper portion of the watershed is covered by forest or open space, while the remaining watershed, including the BSA, is highly developed with commercial, industrial, or residential uses. The confluences of two of the eight major tributaries to the Los Angeles River, the Rio Hondo, and Compton Creek occur within the BSA. The Rio Hondo joins the Los Angeles

[1] Plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils.

[2] Soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions (i.e., absence of oxygen) in the upper part.

[3] Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively.

River in the city of South Gate from the east, and Compton Creek joins the Los Angeles River in the city of Long Beach from the northwest. The 2.5 miles of Compton Creek closest to its confluence with the Los Angeles River are soft-bottom. South of Compton Creek, the Los Angeles River flows within a concrete or rock-lined channel into the estuary in Long Beach. The last three miles of the Los Angeles River are soft-bottom, and sides are lined with rock riprap. The Los Angeles River has a relatively permanent (at least three months) flow during the year and has been designated as a traditional navigable water (TNW), under the CWA. South of the Willow Street bridge, the river is subject to tidal influence and is, therefore, considered a navigable water of the United States under Section 10 of the Rivers and Harbors Act.

As described in the *Jurisdictional Delineation Report*, there are several drainages within the BSA (including Compton Creek) that connect directly or indirectly to the Los Angeles River. Numbering of "drainage boxes" was used during preparation of the Jurisdictional Delineation to identify the locations of drainage features on maps. The Los Angeles River was not allocated a drainage box number.

The BSA contains a total of 75.22 acres of Section 404 jurisdictional nonwetland waters, 3.14 acres of Section 404 wetland waters, and 10.90 acres of Section 10 jurisdictional waters within the Section 404 waters (Table 3.17-1). There are a total of 115.42 acres of streambed and associated riparian habitat within the BSA subject to the jurisdiction of CDFG under Section 1600 of the California Fish and Game Code. RWQCB jurisdiction was determined based on the presence of Section 404 jurisdiction, with one exception; the West Basin of the Dominguez Gap Wetlands is not considered USACE jurisdiction, but is likely still considered jurisdictional by RWQCB. There are a total of 87.30 acres within the BSA under the likely jurisdiction of the RWQCB.

Since there is no public guidance on determining RWQCB jurisdictional areas, RWQCB jurisdiction was determined based on the Federal definition of wetlands (three-parameter) and other waters of the United States. This includes three presumed wetland areas that are believed to be isolated and, therefore, not jurisdictional by the USACE. Although they are not to be jurisdictional by the USACE, the RWQCB often asserts jurisdiction of these areas under the Porter-Cologne Act, and they are consequently included in the total RWQCB jurisdiction. Similar to the USACE, the RWQCB asserts jurisdiction over the roadside drainage ditches on a case-by-case basis, but jurisdiction over such ditches is presumed to coincide for purposes of this analysis.

Table 3.17-1 Summary of Jurisdictional Waters within the I-710 Corridor Project Biological Study Area

Drainage Number	Description	USACE					CDFG		RWQCB	
		Jurisdictional Status	Section 404 Nonwetland Waters (acres)	Section 404 Wetland (acres)	Total Section 404 Area (acres)	Total Section 10 Area (acres)	Likely Jurisdictional Status	Total Potential Area (acres)	Likely Jurisdictional Status	Total Potential Area (acres)
-	Los Angeles River	Jurisdictional	71.64	0.60	72.24	10.90	Jurisdictional	106.62	Jurisdictional	71.64
1	Concrete ditch at bottom of slope	Jurisdictional	0.03	0.000	0.03	0.00	Jurisdictional	0.06	Jurisdictional	0.03
2	Concrete ditch at bottom of slope	Jurisdictional	0.04	0.00	0.04	0.00	Jurisdictional	0.12	Jurisdictional	0.04
3	Artificially created basin	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Jurisdictional	8.94
4	Concrete ditch	Jurisdictional	1.04	0.00	1.04	0.00	Jurisdictional	1.429	Jurisdictional	1.04
5	Concrete ditch	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.000
6	Compton Creek	Jurisdictional	0.56	2.54	3.10	0.00	Jurisdictional	5.49	Jurisdictional	3.10
7	Earthen swale	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
8	Concrete ditch	Nonjurisdictional	0.0059	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
9	Concrete ditch, no OHWM	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
10	Isolated freeway drainage	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
11	Concrete ditch, no OHWM	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
12	Rio Hondo	Jurisdictional	0.39	0.00	0.39	0.00	Jurisdictional	1.05	Jurisdictional	0.39
13	Rectangular concrete channel	Jurisdictional	0.67	0.00	0.67	0.00	Jurisdictional	0.67	Jurisdictional	0.67

Table 3.17-1 Summary of Jurisdictional Waters within the I-710 Corridor Project Biological Study Area

Drainage Number	Description	USACE					CDFG		RWQCB	
		Jurisdictional Status	Section 404 Nonwetland Waters (acres)	Section 404 Wetland (acres)	Total Section 404 Area (acres)	Total Section 10 Area (acres)	Likely Jurisdictional Status	Total Potential Area (acres)	Likely Jurisdictional Status	Total Potential Area (acres)
14	Isolated earthen swale and erosional feature	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
15	Isolated freeway drainage	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
16	Concrete ditch	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Jurisdictional	0.00
17	Upland concrete v-ditch	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
18	Upland concrete v-ditch	Nonjurisdictional	0.00	0.00	0.00	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
19	Concrete ditch	Nonjurisdictional	0.00	0.00	0.003	0.00	Nonjurisdictional	0.00	Nonjurisdictional	0.00
20	Rectangular concrete channel	Jurisdictional	0.87	0.00	0.87	0.00	Jurisdictional	0.87	Jurisdictional	0.87
Total[1]			**75.22**	**3.14**	**78.36**	**.10.9**		**115.42**		**87.30**

Source: *I-710 Corridor Project Jurisdictional Delineation Report*, May 2012.
CDFG = California Department of Fish and Game
I-710 = Interstate 710
OHWM = ordinary high water mark
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers

[1] Total may not reflect sum of individual drainages, due to rounding.

All of the areas satisfying the USACE jurisdictional criteria for waters of the United States and adjacent wetlands, as described above, are also subject to CDFG jurisdiction pursuant to Section 1602 of the California Fish and Game Code. In addition, streambed banks and adjacent riparian areas extending beyond the limits of the USACE jurisdiction are considered subject to CDFG jurisdiction. These areas failed to meet the USACE wetland criteria.

On February 8, 2011, a letter was sent to the USACE with a copy of the draft jurisdictional delineation report, requesting a determination on the jurisdictional status of waters in the BSA. After requesting supplemental information on several drainages, and revisions to the draft jurisdictional delineation, the USACE provided the approved jurisdictional determination on June 8, 2012. (A copy of this letter is provided in Appendix J, Comments and Coordination, in this Draft EIR/EIS.) Additional details regarding agency coordination are included in Chapter 5, Comments and Coordination.

The average annual rainfall for the lower Los Angeles watershed area is 9.9 inches.[1] During the 2008–2009 rainy season, the area received approximately 9.25 inches of rainfall.[2] Prior to 1960, 80 percent of the rain water in the Los Angeles River percolated into the ground. Today, that figure is closer to 8 percent, with the rest draining into the ocean (The River Project 2009).

3.17.2.3 FUNCTIONS AND VALUES

The functions and values of the identified wetlands and other waters within the BSA of the I-710 Corridor were qualitatively assessed in the Jurisdictional Delineation. All wetlands and other waters have some degree of functionality, and no single wetland or other water can perform all of the functions considered below. The following functions are analyzed at low, moderate, or high value levels. Each drainage box is analyzed in Table 3.17-2 based on the criteria outlined below.

HYDROLOGIC REGIME. This function is the ability of a wetland or stream to absorb and store water below ground. 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, and therefore, clay soil has a lower capacity to store water than sandy soils.

1 http://ladpw.org/wrd/precip/alert_rain/normal.cfm.

2 http://ladpw.org/wrd/precip/alert_rain/index.cfm?cont=season.cfm, October 7, 2009.

Table 3.17-2 Functions and Values of Drainages within the I-710 Corridor Project Biological Study Area

Drainage Box Number	Hydrologic Regime	Flood Storage and Flood Flow Modification	Sediment Retention	Nutrient Retention and Transformation	Toxicant Trapping	Social Significance	Wildlife Habitat	Aquatic Habitat
Los Angeles River*	Low/ Moderate	High	Low/ Moderate	Low/ Moderate	Low/ Moderate	Moderate/High	Low/ High	Low/ Moderate
1	Low	Moderate	Low	Low	Low	Low	Low	Low
2	Low	Moderate	Low	Low	Low	Low	Low	Low
3	Moderate	High	High	High	High	High	High	High
4	Low	Moderate	Low	Low	Low	Low	Low	Low
5	Low	Moderate	Low	Low	Low	Low	Low	Low
6	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Moderate
7	Low	Low	Low	Low	Low	Low	Low	Low
8	Low	Moderate	Low	Low	Low	Low	Low	Low
9	Low	Low	Low	Low	Low	Low	Low	Low
10	Low	Low	Low	Low	Low	Low	Low	Low
11	Low	Low	Low	Low	Low	Low	Low	Low
12	Low	High	Low	Low	Low	Low	Low	Low
13	Low	High	Low	Low	Low	Low	Low	Low
14	Low	Low	Low	Low	Low	Low	Low	Low
15	Low	Low	Low	Low	Low	Low	Low	Low
16	Low	Moderate	Low	Low	Low	Low	Low	Low
17	Low	Low	Low	Low	Low	Low	Low	Low
18	Low	Low	Low	Low	Low	Low	Low	Low
19	Low	Low	Low	Low	Low	Low	Low	Low
20	Low	High	Low	Low	Low	Moderate	Low	Low

Source: *I-710 Corridor Project Natural Environment Study,* January 2012.

* The Los Angeles River exhibits higher functions and values south of Willow St., where the channel has a natural bottom that allows development of wetlands, shorebird habitat, and high recreational opportunities.

Earthen-bottomed portions of the Los Angeles River, as well as Drainages 3 and 6, have a moderate capacity to absorb and store water. The earthen-bottomed portions of the Los Angeles River, south of Willow St., are highly compacted with fairly shallow sediment, and the soils in this area do not have the capacity to absorb or store large amounts of water.

Drainage 3, The Dominguez Gap Wetlands system, acts to detain, clean, and infiltrate runoff. Water in the East Basin (outside the BSA) is transferred to the West Basin (within the BSA) only to the extent that it can infiltrate into the groundwater. Excess water form the East Basin is conveyed into the Los Angeles River. The West Basin (Drainage 3) has deep soils with a high capacity to absorb and store water, but water is not discharged from the West Basin into the Los Angeles River. Drainage 6, Compton Creek, for the most part is earthen-bottomed within the

BSA. It is a narrow channel that contains sufficient sediment to hold water for a long enough period of time to support wetland vegetation.

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 its 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.

Several of the drainages within the BSA were created or modified in order to provide increased flood storage capacity during storm events within the project vicinity. As a result, many of the drainages function at a moderate or high level with regards to flood storage and flood flow modification. The Los Angeles River, as well as Drainages 3 (Dominguez Gap Wetlands), 6 (Compton Creek), 12 (Rio Hondo Creek), 13, and 20, function at a high level due to their large size and/or presence of vegetation or other modifications, which would serve to dissipate flood flows downstream. Drainages 1, 2, 4, 5, 8, and 16 all function at a moderate level, as they are not as large as the drainages identified above, but provide flood storage and/or flow modification for large areas and have the capacity to receive moderate amounts of flood water. For the most part, flood waters within these drainages are held for only a short time prior to conveyance into the Los Angeles River.

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., a value of “high” assigned) if the turbidity of the incoming water is greater than that of the outgoing water.

The majority of the drainages within the BSA have a low ability to remove or trap sediment as they are concrete-lined and unvegetated. Earthen-bottomed portions of the Los Angeles River, as well as Drainages 3 and 6, have a moderate or high capacity to trap and retain sediment. The earthen-bottomed portions of the Los Angeles River, south of Willow St., contain islands of vegetation that have grown in sediment that was retained during prior storm events. Drainage 3

has the ability to retain a substantial amount of sediment as it contains two vegetated basins with large capacities. However, most sediment is removed in other portions of the Dominguez Gap system, prior to reaching the West Basin. Drainage 6, Compton Creek, for the most part, is earthen-bottomed within the BSA. It is a narrow channel that contains sufficient sediment and vegetation to trap a moderate amount of sediment prior to conveyance into the Los Angeles River.

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

The majority of the drainages within the BSA function at a low level with regards to nutrient retention and transformation. Since most of the drainages are concrete-lined and unvegetated, they do not contribute at all to this function. Earthen-bottomed portions of the Los Angeles River, as well as Drainages 3 and 6, have a moderate or high capacity in regard to nutrient retention and transformation.

The earthen-bottomed portions of the Los Angeles River, south of Willow St., contain islands of vegetation that have grown in sediment that was retained during prior storm events. Since waters from this section of the Los Angeles River are almost immediately conveyed into the Pacific Ocean, this drainage does not provide nutrients for downstream vegetation. However, it does function to remove excess nutrients from water prior to conveyance into the Pacific Ocean. Drainage 3 has the ability to retain a high amount of nutrients as it contains a large amount of vegetation. Drainage 6 contains a small amount of wetland vegetation that is capable of retaining a moderate amount of nutrients prior to conveyance into the Los Angeles River.

TOXICANT TRAPPING. The major processes by which wetlands 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.

The majority of the drainages within the BSA function at a low level in regard to toxicant trapping. Since most of the drainages are concrete-lined and unvegetated, they do not contribute at all to this function. The earthen-bottomed portions of the Los Angeles River, as well as Drainages 3 and 6, have a moderate or high capacity in regard to toxicant trapping for the same reasons, as they provide for nutrient retention.

The earthen-bottomed portions of the Los Angeles River contain vegetation and sediment that function to trap nutrients and toxicants. Drainage 3 provides a high level of toxicant trapping, as it contains a large amount of vegetation and sediment. There are no proposed impacts within Drainage 3 associated with Alternative 5A. Drainage 6 contains a small amount of vegetation sediment that is capable of trapping sediment and absorbing toxicants.

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 its 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.

The majority of the drainages within the BSA are small concrete-lined drainages adjacent to I-710 or nearby surface streets. Since most of the drainages are flood control structures, public access is generally not permitted. Therefore, most of the drainages do not provide any social significance, as they are not utilized by the public.

The Los Angeles River provides for recreational uses including biking, jogging, and walking, as well as birding and other passive recreational activities. There is a multi-use paved recreational trail along the top of both sides of the Los Angeles River channel throughout the BSA. Wetland areas located at Willow St. are also known birdwatching areas.

WILDLIFE HABITAT. General habitat suitability is the ability of a wetland 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 wildlife diversity. In addition, a variety of open water, intermittent ponding, and perennial ponding is also an important habitat element for wildlife.

The majority of the drainages within the BSA function at a low level in regard to wildlife habitat. Since most of the drainages are concrete-lined and unvegetated, they contribute only minimally to this function. Earthen-bottomed portions of the Los Angeles River, as well as Drainages 3 and 6, have a moderate or high value in regard to wildlife habitat. The earthen-bottomed portions of the Los Angeles River contain wetland areas that attract many avian species. Wetland and riparian habitat within Drainage 3 provides high-quality wildlife habitat for several avian and aquatic species. The small amount of wetland vegetation within Drainage 6 provides a moderate amount of wildlife habitat. Proposed project impacts within Drainage 6 for Alternatives 5A and 6A/B/C would not result in the loss of a substantial amount of wildlife habitat.

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.

The majority of the drainages within the BSA function at a low level in regard to aquatic habitat. Since most of the drainages are concrete-lined and unvegetated, they contribute only minimally to this function.

The earthen-bottomed portions of the Los Angeles River contain wetland areas with sufficient sediment and vegetation to support aquatic invertebrates and provide detrital matter. The water is shallow within this area but is sufficient to provide a moderate amount of habitat for aquatic species. Wetland and riparian habitat within Drainage 3 provides high-quality aquatic habitat due to the presence of deep water, sediment and vegetation. The small amount of wetland vegetation within Drainage 6 provides a moderate amount of wildlife habitat.

3.17.3 ENVIRONMENTAL CONSEQUENCES

3.17.3.1 PERMANENT IMPACTS

BUILD ALTERNATIVES. For the purposes of this impact analysis, a conservative right-of-way footprint was established for each build alternative that includes areas of cut and fill, staging areas for construction vehicles, equipment and materials, haul routes, and water quality treatment features. While some portions of this right-of-way footprint would only be temporarily disturbed during construction and would be revegetated with native plant species, it is not expected that this revegetation would fully restore the functions and values of the impacted habitat in some cases.

Table 3.17-3 shows the extent to which each build alternative would affect USACE, RWQCB, and CDFG jurisdictional waters. In general, Alternatives 6A/B/C would cause greater impacts to jurisdictional waters than Alternative 5A.

The permanent impacts shown in Table 3.17-3 are based on preliminary engineering plans. Where preliminary plans showed the placement of piles or other roadway features, a permanent impact was assumed. Indirect impacts were assumed in areas where shading from a bridge or the elevated freight corridor was identified. Therefore, the analysis of impacts conservatively estimates a worst-case impact scenario wherein all areas within the right-of-way footprint are calculated as permanent impacts, with the exception of shaded areas spanned by bridges (indirect).

Table 3.17-3 I-710 Corridor Project Effects to Potentially Jurisdictional and Nonjurisdictional Areas

Jurisdictional Areas	Permanent (acres)		Temporary (acres)
	Direct	Indirect	
USACE Jurisdictional Areas			
Alternative 5A	0.68	13.97	38.19
Alternatives 6A/B/C	0.83	17.48	59.19
USACE Nonjurisdictional Areas			
Alternative 5A	0.77	0.00	1.41
Alternatives 6A/B/C	3.52	0.58	7.06
RWQCB Jurisdictional Areas			
Alternative 5A	0.68	13.97	38.19
Alternatives 6A/B/C	3.62	17.56	65.26
RWQCB Nonjurisdictional Areas			
Alternative 5A	0.77	0.00	1.41
Alternatives 6A/B/C	0.73	0.5	0.99
CDFG			
Alternative 5A	0.87	19.43	52.37
Alternatives 6A/B/C	5.64	24.96	84.81

CDFG = California Department of Fish and Game
I-710 = Interstate 710
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers

Based on the information currently available, the worst-case impact scenario associated with Alternative 5A would result in direct permanent impacts to approximately 0.68 acre and indirect permanent impacts to approximately 13.97 acres of USACE jurisdictional areas. Alternative 5A would result in direct permanent impacts to 0.87 acres and indirect permanent impacts to approximately 19.43 acres of CDFG jurisdictional areas.

The worst-case impact scenario associated with Alternatives 6A/B/C is expected to result in direct permanent impacts to approximately 0.83 acres and indirect permanent impacts to approximately 17.48 acres of USACE/RWQCB jurisdictional areas. An additional 2.79 acres of direct impact to RWQCB jurisdiction at the Dominguez Gap West Basin would result from Alternatives 6/A/B/C. Alternatives 6A/B/C would result in direct permanent impacts to 5.64 acres and indirect permanent impacts to approximately 24.96 acres of CDFG jurisdictional areas.

Jurisdictional areas would be impacted at three locations by Alternatives 6A/B/C that would not be affected by Alternative 5A. Alternatives 6A/B/C would result in permanent impacts to areas considered to be jurisdictional by the RWQCB during the pile driving of three piles during

construction of the freight corridor over Drainage 3. With Alternatives 6A/B/C, eight piles would be driven within jurisdictional nonwetland waters of the Los Angeles River at the location of the SR-91 crossing of the Los Angeles River. The proposed freight corridor under Alternatives 6A/B/C would also result in the driving of 11 additional piles within jurisdictional nonwetland waters of the Los Angeles River. More specifically, six piles are proposed within the low-flow channel of freshwater waters of the Los Angeles River, and five piles are proposed within the upper concrete banks of the Los Angeles River (see Sheets 11 and 12 of Appendix S-2 of this Draft EIR/EIS).

The following describes permanent impacts to the functions and values of wetlands and other waters in the BSA:

HYDROLOGIC REGIME. The majority of the drainages within the BSA have a low ability to absorb and store water as they are concrete-lined. Proposed project impacts within the Los Angeles River include expanded bridge footings with a small footprint that would not substantially affect the existing hydrologic regime. Alternative 5A would not result in any permanent impacts within Drainage 3 (Dominguez Gap Wetlands). Alternatives 6A/B/C would result in permanent impacts to Drainage 3 through the filling in of the eastern part of each basin to accommodate a new freight corridor at grade. Due to the permanent removal of a large amount of the basins within Drainage 3, the proposed permanent impacts would substantially alter the hydrologic regime of this drainage. Proposed project impacts within Drainage 6 (Compton Creek) include expanded bridge footings with a small footprint that would not substantially affect the existing hydrologic regime. Following implementation of the project, all drainages within the BSA would continue to function at the existing level with regard to hydrologic regime.

FLOOD STORAGE AND FLOOD FLOW MODIFICATION. Proposed project impacts within the Los Angeles River, as well as Drainages 6 (Compton Creek), 12 (Rio Hondo Creek), 13, and 20 for Alternative 5A would not substantially alter flood storage or flood flow modification. Proposed project impacts within Drainage 3 (Dominguez Gap Wetlands) for Alternatives 6A/B/C would result in the loss of almost one-third of the basins west of the Los Angeles River, thereby diminishing flood storage capacity.

SEDIMENT RETENTION. The majority of the drainages within the BSA have a low ability to remove or trap sediment as they are concrete-lined and unvegetated. Therefore, impacts to most of the drainages would not affect sediment retention. Proposed project impacts within the Los Angeles River include expanded bridge footings with a small footprint that would not substantially affect the existing sediment retention capabilities of this drainage. Proposed project impacts within Drainage 3 under all Alternatives 6A/B/C are not expected to substantially affect the sediment retention. Proposed project impacts for Alternatives 5A and

6A/B/C within Drainage 6 are minimal and would not substantially affect the existing hydrologic regime.

NUTRIENT RETENTION AND TRANSFORMATION. Proposed project impacts within the Los Angeles River associated with Alternatives 5A and 6A/B/C are relatively small and would not substantially affect the existing level of nutrient retention capabilities of this drainage. There are no proposed permanent impacts within Drainage 3 associated with Alternative 5A. Proposed impacts associated with Alternatives 6A/B/C would result in the loss of approximately one-third of the wetland system associated with Drainage 3 and would substantially reduce its value related to nutrient retention and transformation. Proposed project impacts within Drainage 6 under Alternatives 5A and 6A/B/C within Drainage 6 are minimal and would not substantially affect nutrient retention or transformation.

TOXICANT TRAPPING. Proposed project impacts within the Los Angeles River associated with Alternatives 5A and 6A/B/C are relatively small and would not substantially affect the existing moderate level of toxicant trapping capabilities of this drainage. There are no proposed permanent impacts within Drainage 3 associated with Alternative 5A. Proposed impacts associated with Alternatives 6A/B/C would result in the loss of approximately one-third of the wetland system associated with Drainage 3 and would substantially reduce its value related to toxicant trapping. Proposed project impacts within Drainage 6 for Alternatives 5A and 6A/B/C are minimal and would not substantially affect toxicant trapping.

SOCIAL SIGNIFICANCE. Proposed project impacts within the Los Angeles River associated with Alternatives 5A and 6A/B/C are relatively small and all social uses would be retained. There are no proposed permanent impacts within Drainage 3 associated with Alternative 5A. Proposed impacts associated with Alternatives 6A/B/C would result in the loss of approximately one-third of this area and would substantially reduce the social significance of this drainage because its potential public use would be diminished.

WILDLIFE HABITAT. Proposed project impacts to wildlife habitat within the Los Angeles River associated with Alternatives 5A and 6A/B/C are relatively small and would not substantially alter wildlife habitat values of this drainage. There are no proposed permanent impacts within Drainage 3 associated with Alternative 5A. Proposed impacts associated with Alternatives 6A/B/C would result in the loss of approximately one-third of the wildlife habitat within Drainage 3 and would substantially reduce its function as wildlife habitat. Proposed project impacts within Drainage 6 for Alternatives 5A and 6A/B/C would not result in the loss of a substantial amount of wildlife habitat.

AQUATIC HABITAT. Proposed project impacts within the Los Angeles River associated with Alternatives 5A and 6A/B/C are relatively small and would not substantially affect the

existing aquatic habitat values of this drainage. There are no proposed permanent impacts within Drainage 3 associated with Alternative 5A. Proposed impacts associated with Alternatives 6A/B/C would result in the loss of approximately one-third of the aquatic habitat within this drainage and would substantially reduce its function as aquatic habitat. Proposed project impacts within Drainage 6 for Alternatives 5A and 6A/B/C are minimal and would not result in the loss of a substantial amount of aquatic habitat.

NO BUILD ALTERNATIVE. Under Alternative 1, the I-710 Corridor Project would not be constructed. No permanent (direct or indirect) impacts to jurisdictional waters would result from Alternative 1.

3.17.3.2 PUBLIC HEALTH CONSIDERATIONS

No public health considerations exist with regard to project impacts on jurisdictional areas.

3.17.4 AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

Measure NC-1, described in Section 3.16, Natural Communities, will be implemented to avoid and minimize, mitigate, and/or compensate impacts to jurisdictional areas.