

### **3.18 Wetlands and Other Waters**

This section of the document focuses on the issues covered in Sections 5.4 of the *Natural Environment Study* (NES) (LSA Associates, Inc., 2008), the *Jurisdictional Delineation and Assessment Report* (2007; Revised 2008; Appendix L of the NES) and the *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (ERDC 2008). Detailed discussions and maps of identified jurisdictional features are provided in the *Jurisdictional Delineation and Assessment Report*. The draft 404(b)(1) Alternatives Analysis is provided in Appendix N and the Conceptual Mitigation Plan is provided in Appendix Q.

#### **3.18.1 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) 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).

Caltrans, FHWA, USACE, EPA, and the U.S. Fish and Wildlife Service entered into a memorandum of understanding (MOU) to integrate NEPA and the Clean Water Act for EIS projects that have five or more acres of permanent impact to Waters of the

United States. Under this MOU, the signatory agencies agree to coordinate at three checkpoints: 1) purpose and need, 2) identification of range of alternatives, and 3) preliminary determination of the least environmentally damaging practicable alternative (LEDPA) and conceptual mitigation plan. The goal of the MOU procedure is to streamline the environmental review process by integrating the procedural requirements of NEPA with the substantive requirements of Section 404 of the CWA, beginning at the early stages of project development and continuing through the final stages of the environmental evaluation. This multi-agency integration helps to ensure all applicable environmental requirements, laws, and regulations are achieved in a quality and timely manner. The integration process also enables the USACE to more efficiently adopt the federal lead agency's EIS in support of its independent NEPA compliance responsibilities.

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 to oversee water quality. The RWQCB also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

### 3.18.2 Affected Environment

#### 3.18.2.1 USACE and CDFG Jurisdiction

Areas under the jurisdiction of 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 or beyond the ordinary high water mark to the limit of any adjacent wetlands, if present. The ordinary high water mark 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 non-wetland 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<sup>1</sup>, (2) hydric soils<sup>2</sup>, and (3) wetland hydrology<sup>3</sup>. Generally, non-wetland waters are those within the ordinary high water mark that are not wetlands.

CDFG regulated 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

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<sup>1</sup> Plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils.

<sup>2</sup> 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.

<sup>3</sup> 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.

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.

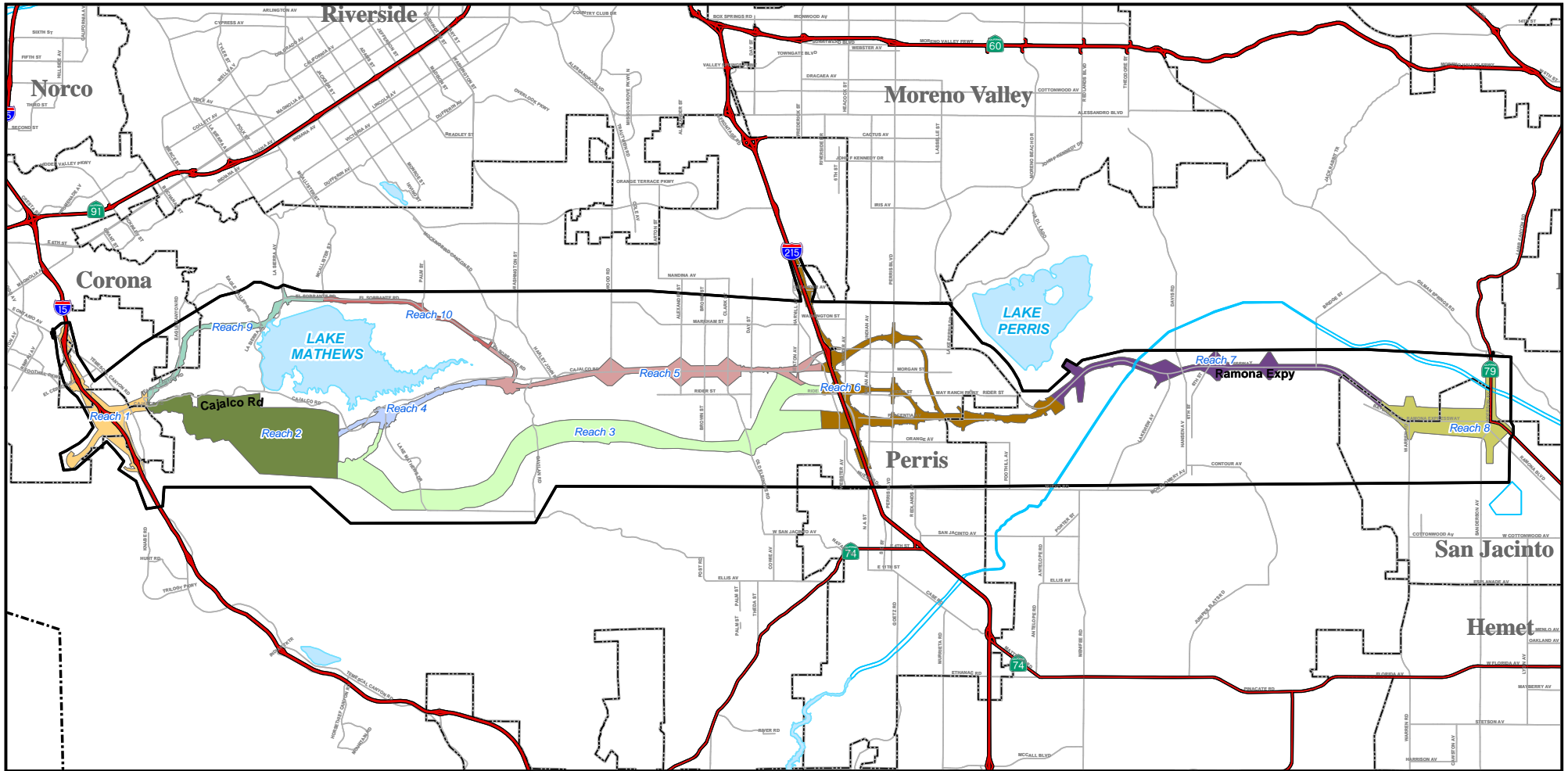
Typically, USACE jurisdictional areas are located within CDFG jurisdictional areas, because CDFG jurisdiction often extends to riparian areas that lack evidence of an ordinary high water mark or one or more of the requisite wetland criteria (hydrology, hydric soils, hydrophytic vegetation) and therefore are not regulated by USACE. Therefore, USACE jurisdictional areas are usually smaller areas located within CDFG jurisdictional areas.

### **3.18.2.2 Jurisdictional Areas in the MCP Study Area**

The MCP study area is located within the Santa Ana River watershed and the San Jacinto River watershed. The Hydrologic Units within which the project study area lie are the Santa Ana River Hydrologic Unit and the San Jacinto Valley Hydrologic Unit, which are further divided into Hydrologic Areas and Hydrologic Sub-Areas (HSAs).

The MCP project encompasses the following HSAs within the Santa Ana River Hydrologic Unit: Temescal HSA, Arlington HSA, Bedford HSA, and Cajalco HSA. The MCP project encompasses the following HSAs within the San Jacinto Valley Hydrologic Unit: Perris Valley HSA, Lakeview HSA, Hemet HSA, and Gilman Hot Springs HSA.

The *Jurisdictional Delineation and Assessment Report* divided the study area into geographic “Reaches,” as shown in Figure 3.18.1. The definition of each Reach was based on watersheds and similarity of wetland areas for the MCP project. Reaches defined in the Jurisdictional Delineation are different than the “riparian reaches” described in USACE reports (see discussion in Section 3.18.2.3, Functions and Values). During the field surveys for the MCP delineation, numerous distinct jurisdictional features were identified within the MCP study area and included perennial, ephemeral, and intermittent drainages and wetlands. USACE and CDFG jurisdictional areas are summarized by Reach in Table 3.18.A. The study area contains approximately 45.59 hectares (ha) (112.65 acres [ac]) of USACE jurisdictional waters, of which 16.75 ha (41.39 ac) consist of wetlands. The study area also contains approximately 104.2 ha (257.5 ac) of CDFG jurisdictional area.

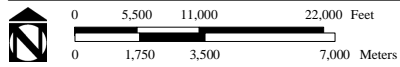


**Legend**

- County Boundary
  - Mid County Parkway Study Area
  - City Limits
  - Highways
  - Major Roads
- |                |         |          |
|----------------|---------|----------|
| Survey Reaches | Reach 4 | Reach 8  |
| Reach 1        | Reach 5 | Reach 9  |
| Reach 2        | Reach 6 | Reach 10 |
| Reach 3        | Reach 7 |          |

Figure 3.18.1

SOURCE: TBM (2006); LSA (2/07)



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**Jurisdictional Delineation Reaches**

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**Table 3.18.A Summary of CDFG and USACE Jurisdictional Areas**

Reach	Jurisdictional Areas, ha (ac)			
	CDFG Total	USACE		
		Wetland	Nonwetland	USACE Total
1	9.37 (23.16)	1.34 (3.32)	4.88 (12.05)	6.22 (15.38)
2	17.17 (42.42)	2.51 (6.21)	2.73 (6.75)	5.24 (12.96)
3	25.74 (63.61)	2.46 (6.08)	5.46 (13.50)	7.92 (19.58)
4	5.62 (13.88)	0.58 (1.44)	2.03 (5.01)	2.61 (6.45)
5	12.69 (31.35)	3.42 (8.45)	0.93 (2.29)	4.35 (10.74)
6	5.37 (13.26)	0.74 (1.84)	4.17 (10.31)	4.92 (12.15)
7	2.00 (4.94)	1.00 (2.48)	0.65 (1.61)	1.66 (4.09)
8	21.94 (54.22)	4.17 (10.31)	7.43 (18.37)	11.61 (28.68)
9	3.48 (8.61)	0.27 (0.67)	0.37 (0.91)	0.64 (1.59)
10	0.83 (2.06)	0.24 (0.59)	0.19 (0.46)	0.42 (1.04)
<b>Total</b>	<b>104.21 (257.50)</b>	<b>16.73 (41.39)</b>	<b>28.84 (71.26)</b>	<b>45.59 (112.65)</b>

Source: *Jurisdictional Delineation and Assessment Report*, LSA Associates, Inc. 2008.

ac = acres

CDFG = California Department of Fish and Game

ha = hectares

USACE = United States Army Corps of Engineers

The USACE reviewed the *Jurisdictional Delineation and Assessment Report* and issued its verification of the report by letter dated April 10, 2008 (copy provided in Appendix J of this EIR/EIS).

The average annual rainfall based on a central portion of the study area (City of Perris) is 26.4 centimeters (cm) (10.4 inches [in]), per the Western Regional Climate Center (<http://www.wrcc.dri.edu/htmlfiles/ca/ca.ppt.html>). Within the Biological Study Area (BSA) for the MCP project, the total area of developed area (as described in the NES) that would correspond to the amount of impervious surfaces is approximately 27 percent.

### 3.18.2.3 Functions and Values

The functions and values of the identified wetlands within the MCP study area were initially qualitatively assessed in the Jurisdictional Delineation using the functions and values described in the Wetland Evaluation Technique (WET; Adamus et al. 1987). This methodology provides a cursory understanding of the quality of the functions and values of the wetlands affected by each of the Build Alternatives. The WET manual describes several functions and values of wetlands considered beneficial to society, including: groundwater recharge/discharge, flood flow alteration, sedimentation stabilization, sediment/toxicant retention, nutrient removal/transformation, and production export. The results of the functions and values assessment are summarized in Table 3.18.B for all the Reaches and associated

**Table 3.18.B Wetlands Functions and Values**

Reach	Reach 1	Reach 2	Reach 3	Reach 4	Reach 5	Reach 6	Reach 7	Reach 8	Reach 9	Reach 10
Alternative	4,5,6,7,9	4,5,6,7,9	9	4,5,6,7	4,5,6,7	4,5,6,7,9	4,5,6,7,9	4,5,6,7,9	6	6
<b>Function/Value</b>										
Groundwater Discharge/Recharge	Moderate	High	High	Moderate	High	Low	Moderate	Moderate	High	Moderate
Flood Flow Alteration	Low	High	High	Moderate	Moderate	Low	Moderate	High	High	Low
Sediment Stabilization	Moderate	High	High	Moderate	High	Low	Moderate	Moderate	High	Low
Sediment/Toxicant Retention	Moderate	High	High	High	High	Moderate	Moderate	High	High	Low
Nutrient Removal/Transformation	Low	High	High	Moderate	High	Moderate	High	High	High	Moderate
Production Export	High	High	High	Low	High	Low	Low	High	High	Low
Wildlife Habitat	Moderate	High	High	Moderate	Low	Low	Moderate	Moderate	High	Low
Uniqueness/Heritage	High	High	High	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Low
Recreation	Low	High	High	Low	Low	Low	Low	Low	Low	Low

Source: Jurisdictional Delineation and Assessment Report, LSA Associates, Inc. 2008.



alternatives. The ranking of quality (high, moderate, and low) correlates directly with the functions and values that collectively exist within each Reach. Most Reaches share multiple alternatives, which results in shared wetland qualities as well. Functions and values with mostly high ratings per Reach are associated with high wetlands quality; these occur in mostly undisturbed and undeveloped areas on Reaches 2, 3, and 9 and are associated with all the alternatives (Alternatives 4, 5, 6, 7, and 9, and their respective design variations). The functions and values with mostly low ratings per Reach are associated with low wetlands quality; these occur primarily in developed areas or adjacent to developed areas on Reaches 6 and 10 (Alternatives 4, 5, 6, 7, and 9 and their respective design variations). For most of the alternatives that share common Reaches, the range of wetlands quality ranges from low to high. All of the alternatives contain some high-quality wetlands.

The functions, or integrity, of the identified waters of the United States and riparian ecosystems in each MCP project alternative were further assessed at a watershed level using a suite of hydrologic, water quality, and habitat integrity indicators identified in the report titled *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (ERDC 2008).

Riparian ecosystem integrity was assessed by first identifying “riparian reach” assessment units and then assessing each riparian reach using a suite of hydrologic, water quality, and habitat integrity indicators (Smith 2003, 2006). A riparian reach was defined as a segment of the main stem, bankfull stream channel and the adjacent riparian ecosystem exhibiting relatively homogenous characteristics with respect to geology, geomorphology, channel morphology, substrate type, vegetation communities, and cultural alteration. The boundaries of the aquatic resources study area included not only the riparian reaches that are in the direct impact area of the Build Alternatives, but also include (for indirect and cumulative effects) the local drainage and drainage basin of each riparian reach.

Fifteen assessment criteria were used to evaluate the impacts of each Alternative to waters of the United States and riparian ecosystems. These indicators represent the physical, chemical, and biological characteristics and processes of riparian ecosystems at three spatial levels: (1) the riparian reach proper, (2) uplands adjacent to the riparian reach, and (3) the drainage basin of the riparian reach. Multi-indicators related to land use/land cover, vegetation communities, hydrology, sediment, and disturbance factors were used. Indicator metrics were measured in the field using

ground data collection methods supplemented with aerial photography. Indicator metrics were scaled to a culturally unaltered “reference condition,” and selected indicators were then combined into hydrology, water quality, and habitat integrity indices for each riparian reach.

The functional (integrity) assessment was applied to these indicators in order to qualitatively and quantitatively assess and compare potential direct and indirect impacts of the Build Alternatives of the proposed MCP project on waters of the United States and riparian ecosystems. The quantity of riparian ecosystem in a riparian reach is represented by the extent (i.e., acres or miles) of riparian ecosystem in a riparian reach. A qualitative assessment was conducted using integrity indices for hydrologic, water quality, and habitat of a riparian reach. Integrity units are calculated by multiplying the hydrologic, water quality, and habitat integrity indices of a riparian reach by the acres of riparian ecosystem in a riparian reach. This provides an integrated measure of riparian ecosystem quality and quantity in a riparian reach. The results of this effort augment the findings in the *Jurisdictional Delineation and Assessment Report*.

### **3.18.3 Environmental Consequences**

#### **3.18.3.1 Permanent Impacts**

##### ***Build Alternatives***

Table 3.18.C shows the area of direct impacts to wetlands and nonwetland waters under USACE jurisdiction. Table 3.18.D shows the area of direct impacts to CDFG jurisdictional areas per land use type. The impacts summarized in Tables 3.18.C and D take into consideration jurisdictional areas avoided by the construction of bridges and exclude areas that will be impacted by the SR-79 realignment project prior to construction of the MCP project.

Alternative 9 would result in fewer impacts to both CDFG riparian habitat and streambeds, and wetlands and nonwetland waters of the United States under USACE jurisdiction, followed by Alternatives 4 and 5, and then Alternatives 6 and 7.

**Table 3.18.C Permanent Impacts to USACE Jurisdictional Areas**

Alternative/DV	Permanent Impacts, ha (ac)		
	Wetlands	Nonwetlands	USACE Total
Alt. 4 Base Case	1.8 (4.5)	4.2 (10.5)	6.0 (14.9)
Alt. 4 SJN DV	2.6 (6.3)	4.1 (10.1)	6.6 (16.4)
Alt. 4 TWS DV	1.8 (4.5)	4.1 (10.1)	5.9 (14.5)
Alt. 5 Base Case	1.7 (4.3)	4.2 (10.5)	6.0 (14.8)
Alt. 5 SJN DV	2.5 (6.2)	4.1 (10.0)	6.6 (16.2)
Alt. 5 TWS DV	1.7 (4.3)	4.1 (10.1)	5.8 (14.4)
Alt. 6 Base Case	2.2 (5.4)	4.7 (11.7)	6.9 (17.2)
Alt. 6 SJN DV	3.0 (7.3)	4.6 (11.3)	7.5 (18.6)
Alt. 6 TWS DV	2.2 (5.4)	4.6 (11.3)	6.8 (16.8)
Alt. 7 Base Case	2.1 (5.3)	4.7 (11.7)	6.9 (17.0)
Alt. 7 SJN DV	2.9 (7.2)	4.6 (11.3)	7.5 (18.5)
Alt. 7 TWS DV	2.1 (5.3)	4.6 (11.3)	6.7 (16.6)
Alt. 9 Base Case	0.7 (1.7)	3.6 (8.8)	4.2 (10.5)
Alt. 9 RD DV	0.3 (0.8)	2.7 (6.7)	3.0 (7.5)
Alt. 9 PP-E DV	0.7 (1.7)	3.6 (8.8)	4.2 (10.5)
Alt. 9 SJN DV	1.4 (3.5)	3.4 (8.4)	4.8 (11.9)
Alt. 9 TWS DV	0.7 (1.7)	3.4 (8.4)	4.1 (10.1)

Source: *Natural Environment Study*, LSA Associates, Inc. 2008.

ac = acres

Alt = Alternative

DV = Design Variation

ha = hectares

PP-E = Placentia Avenue/Perris Boulevard Elevated Grade

RD = Rider Street

SJN = San Jacinto North

TWS = Temescal Wash Area

USACE = United States Army Corps of Engineers

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**Table 3.18.D Area of Direct Impacts to CDFG Jurisdictional Areas per Land Use Type**

NOTE: Impacts to CDFG jurisdictional areas generally encompass USACE jurisdictional areas.

Alternative/DV	Direct Impacts, ha (ac)														Total Impacts
	Alkali Grassland/ Playa	Chaparral	Dairy & Livestock Feedyards	Developed/ Ruderal	Diegan Coastal Sage Scrub	Field Croplands	Grove/ Orchard	Marsh	Non-Native Grassland	Peninsular Juniper Woodland and Scrub	Riparian Forest	Riparian Scrub	Riversidean Alluvial Fan Sage Scrub	Riversidean Sage Scrub	
Alt 4 Base Case	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.12 (10.17)	0.00 (0.01)	1.64 (4.06)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	1.72 (4.26)	1.87 (4.62)	0.00 (0.00)	0.80 (1.98)	11.3 (27.8)
Alt 4 SJN DV	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)	4.08 (10.08)	0.00 (0.01)	1.54 (3.80)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	2.42 (5.97)	1.87 (4.63)	0.00 (0.00)	0.80 (1.98)	11.8 (29.1)
Alt 4 TWS DV	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	3.95 (9.77)	0.00 (0.01)	1.64 (4.06)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	1.72 (4.26)	1.87 (4.62)	0.00 (0.00)	0.80 (1.98)	11.1 (27.4)
Alt 5 Base Case	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.01 (9.92)	0.00 (0.01)	1.55 (3.84)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	1.72 (4.26)	1.99 (4.91)	0.00 (0.00)	0.80 (1.98)	11.2 (27.6)
Alt 5 SJN DV	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)	3.98 (9.83)	0.00 (0.01)	1.45 (3.59)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	2.42 (5.97)	1.99 (4.92)	0.00 (0.00)	0.80 (1.98)	11.6 (28.9)
Alt 5 TWS DV	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	3.85 (9.51)	0.00 (0.01)	1.55 (3.84)	0.02 (0.04)	0.00 (0.00)	0.85 (2.11)	0.17 (0.42)	1.72 (4.26)	1.99 (4.91)	0.00 (0.00)	0.80 (1.98)	11.0 (27.2)
Alt 6 Base Case	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.54 (11.23)	0.03 (0.08)	1.66 (4.11)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.04 (5.04)	3.44 (8.51)	0.01 (0.03)	0.91 (2.26)	14.6 (36.1)
Alt 6 SJN DV	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)	4.50 (11.13)	0.03 (0.08)	1.56 (3.86)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.73 (6.75)	3.44 (8.51)	0.01 (0.03)	0.91 (2.26)	15.1 (37.4)
Alt 6 TWS DV	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.38 (10.82)	0.03 (0.08)	1.66 (4.11)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.04 (5.04)	3.44 (8.51)	0.01 (0.03)	0.91 (2.26)	14.4 (35.7)
Alt 7 Base Case	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.44 (10.98)	0.03 (0.08)	1.58 (3.90)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.04 (5.04)	3.56 (8.80)	0.01 (0.03)	0.91 (2.26)	14.5 (35.9)
Alt 7 SJN DV	0.00 (0.01)	0.00 (0.00)	0.00 (0.00)	4.40 (10.88)	0.03 (0.08)	1.47 (3.64)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.73 (6.75)	3.57 (8.81)	0.01 (0.03)	0.91 (2.26)	15.1 (37.2)
Alt 7 TWS DV	0.03 (0.07)	0.00 (0.00)	0.00 (0.01)	4.28 (10.57)	0.03 (0.08)	1.58 (3.90)	0.08 (0.20)	0.00 (0.00)	1.37 (3.39)	0.46 (1.13)	2.04 (5.04)	3.56 (8.80)	0.01 (0.03)	0.91 (2.26)	14.4 (35.5)
Alt 9 Base Case	0.03 (0.07)	0.20 (0.49)	0.00 (0.01)	2.24 (5.53)	0.00 (0.01)	0.59 (1.47)	0.14 (0.35)	0.00 (0.00)	0.54 (1.34)	0.07 (0.17)	0.36 (0.89)	1.11 (2.75)	0.00 (0.00)	1.13 (2.79)	6.4 (15.9)
Alt 9 RD DV	0.03 (0.07)	0.20 (0.49)	0.00 (0.01)	1.59 (3.94)	0.00 (0.01)	0.43 (1.07)	0.14 (0.35)	0.00 (0.00)	0.55 (1.35)	0.07 (0.17)	0.32 (0.79)	0.94 (2.32)	0.00 (0.00)	0.81 (2.01)	5.1 (12.6)
Alt 9 PP-E DV	0.03 (0.07)	0.20 (0.49)	0.00 (0.01)	2.24 (5.53)	0.00 (0.01)	0.59 (1.47)	0.14 (0.35)	0.00 (0.00)	0.54 (1.34)	0.07 (0.17)	0.36 (0.89)	1.11 (2.75)	0.00 (0.00)	1.13 (2.79)	6.4 (15.9)
Alt 9 SJN DV	0.00 (0.01)	0.20 (0.49)	0.00 (0.00)	2.24 (5.43)	0.00 (0.01)	0.49 (1.22)	0.14 (0.35)	0.00 (0.00)	0.54 (1.33)	0.07 (0.17)	1.05 (2.59)	1.12 (2.76)	0.00 (0.00)	1.13 (2.79)	6.9 (17.1)
Alt 9 TWS DV	0.03 (0.07)	0.20 (0.49)	0.00 (0.01)	2.07 (5.12)	0.00 (0.01)	0.59 (1.47)	0.14 (0.35)	0.00 (0.00)	0.54 (1.34)	0.07 (0.17)	0.36 (0.89)	1.11 (2.75)	0.00 (0.00)	1.13 (2.79)	6.3 (15.5)

Source: Natural Environment Study, LSA Associates, Inc. 2008.

ac = acres  
 Alt = Alternative  
 CDFG = California Department of Fish and Game  
 DV = Design Variation  
 ha = hectares

PP-E = Placentia Avenue/Perris Boulevard Elevated Grade  
 RD = Rider Street  
 SJN = San Jacinto North  
 TWS = Temescal Wash Area  
 USACE = United States Army Corps of Engineers

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As previously discussed, the objective of the USACE ERDC study was to quantitatively and qualitatively analyze and compare the direct and indirect impacts of the MCP Build Alternatives on waters of the United States and riparian ecosystems.

Direct and indirect impacts of the MCP Build Alternatives were assessed by simulating the changes that could be expected to occur as a result of implementation of each alternative, and then comparing the simulated results to baseline conditions. Normalized rank scores were calculated by dividing the potential impact (e.g., length, area, integrity units) of each alternative corridor alignment by the potential impact of the alternative corridor alignment with the greatest impact. Corridors with the lowest normalized rank scores have the least potential impact. Tables 3.18.E and 3.18.F summarize the results and normalized rank scores for criteria assessing potential impacts to waters of the United States and riparian ecosystems. These criteria include direct impacts to waters of the United States and riparian ecosystems within the project footprint as well as indirect impacts measured in terms of both quantity and quality of affected areas.

Overall, the impact of all the MCP Build Alternatives to riparian ecosystems was minimal given the relatively large size of the permanent impact footprint associated with the project alternatives. The minimal impact reflects the strategic placement of alternative corridor alignments to avoid riparian ecosystems to the extent feasible. Under this analysis, Alternative 9 had the least impact among the MCP Build Alternatives to aquatic resources and riparian ecosystems. Alternatives 4 and 5 had the second greatest impact and Alternatives 6 and 7 had the greatest impact.

Table 3.18.E summarizes the normalized rank scores for the 10 criteria assessing impacts to waters of the United States and riparian ecosystems (7 criteria assess only direct impacts, and 3 criteria assess both direct and indirect impacts).

In addition to the 10 criteria for aquatic resources, there are 5 additional criteria pertaining to nonaquatic resources, such as critical habitat of upland species and Multiple Species Habitat Conservation Plan (MSHCP) areas. The normalized rank scores for all 15 criteria are shown in the table below as the sum total with a possible range of 0–15. The sum of normalized rank scores provides a general indication of the overall potential impact of each alternative corridor alignment. For example, alternative corridor alignments with values near the maximum value of 15 consistently had the greatest level of potential impact across all criteria. However, it

**Table 3.18.E Potential Direct Impacts to Waters of the United States and Riparian Ecosystems**

NOTE: Criteria assessing threatened, endangered, or sensitive species habitat are not included in this tabulation.

Alt.	Direct Impacts						Direct and Indirect Impacts				Sum of Normalized Rank Scores <sup>1</sup>
	Criterion 1: Non-wetland waters stream channels	Criterion 2: Length of main stem and tributary stream channels	Criterion 3: Area of riparian ecosystems	Criterion 4: Area of aquatic resources	Criterion 7a: Change in quantity of hydrologic integrity units in riparian ecosystems	Criterion 7b: Change in quantity of water quality integrity units in riparian ecosystems	Criterion 7c: Change in quantity of habitat integrity units in riparian ecosystems	Criterion 8a: Change in quantity of hydrologic integrity units in riparian reaches	Criterion 8b: Change in quantity of water quality integrity units in riparian reaches	Criterion 8c: Change in quantity of habitat integrity units in riparian reaches	
4	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	6.0
5	0.8	0.9	0.6	0.7	0.7	1.0	0.6	0.6	1.0	0.9	7.8
6	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.7
7	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	9.8
9	0.9	0.5	0.2	0.2	0.1	0.0	0.2	0.3	0.1	0.3	2.8

Source: *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California*, ERDC 2008.

<sup>1</sup> Normalized Rank Score is calculated by dividing the potential impact of each alternative corridor by the potential impact of the alternative corridor alignment with the greatest impact  
Alt. = Alternative



**Table 3.18.F Sum of Normalized Rank Scores of All 15 Criteria**

Alternative	Sum of Normalized Rank Scores
4	9.1
5	10.8
6	14.1
7	14.1
9	6.1

Source: *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California*, ERDC 2008.

should be noted that this aggregation of normalized rank scores assumes equal weight for all 15 criteria, which includes biases and redundancies that result for equally weighing all 15 criteria.

Additional indirect impacts of the project on jurisdictional areas adjacent to the project footprint may result from edge effects such as exotic plant infestations, pollutants from storm water runoff from the parkway, and unauthorized recreational use. Treated storm water runoff from the parkway to riparian/riverine areas would provide additional water to maintain wetlands, nonwetland waters, and streambeds.

Indirect impacts were expected to change several indicators related to Land Use/Land Cover at the buffer, local drainage, and drainage basin spatial scales within local drainage or drainage basin of a riparian reach, even if the MCP Build Alternative did not directly impact a riparian reach. Indirect impacts to riparian ecosystems were assessed with the direct effects, as summarized in Criteria 8a–8c in Table 3.18.E.

Based on the collective temporary and permanent impacts, Alternative 9 TWS DV is the least environmentally damaging of all of the MCP Build Alternatives, impacting a total of 7.7 ha (19.1 ac) of USACE jurisdictional areas. Alternative 9 Rider Street Design Variation (RD DV) and Alternative 9 San Jacinto North Design Variation (SJN DV) impact smaller amounts of USACE jurisdictional areas (5.6 ha [13.8 ac] and 7.4 ha [18.3 ac], respectively), but these design variations have costs, and other community and socioeconomic impacts (e.g., displacement of large employment-generating land uses) that render them impracticable, as discussed in the Section 404(b)(1) Alternatives Analysis (Appendix N). The high quality wetlands impacted by Alternative 9 are located in segments (TWS, San Jacinto [SJ], and San Jacinto South [SJS]) that are common to Alternatives 4, 5, 6, and 7, and their design variations.

Impacts to wetlands and other jurisdictional waters would necessitate a Section 1602 Agreement for Streambed Alteration from the CDFG, a Section 401 water quality certification from the RWQCB, and a Section 404 permit from the USACE. Coordination efforts with these agencies are discussed further in Chapter 5.0, Summary of Public Involvement Process/Consultation/Tribal Coordination.

### ***No Build Alternatives***

Under Alternative 1A, the planned street network would be constructed, except for improvements to Cajalco Road and Ramona Expressway. Because Cajalco Road and Ramona Expressway would remain as they are today, there would be no permanent impacts to wetlands along these roadways under Alternative 1A. Therefore, permanent impacts to wetlands and other waters in the vicinity of Cajalco Road and Ramona Expressway would be less for Alternative 1A than impacts that would occur as a result of the MCP Build Alternatives.

Under Alternative 1B, the planned street network would be developed according to the Circulation Element of the Riverside County General Plan. Under Alternative 1B, permanent impacts to wetlands and other waters would be expected to be less than the MCP Build Alternatives since it would widen Cajalco Road and Ramona Expressway. Between I-15 and El Sobrante Road, the impacts of Alternative 1B would be the same as Build Alternatives 6 and 7, since these alternatives implement the General Plan roadway alignments in this area.

### ***Discussions of Impacts Relative to MSHCP Amendment***

The EIR/EIS for the MSHCP found that implementation of the MSHCP would not have a substantial adverse impact on any wetland or other sensitive natural community identified in local or regional plans, policies, or regulations or by the Wildlife Agencies.

As part of the CEQA review of applications for Covered Activities within the MSHCP Plan Area, pursuant to Section 6.1.2 of the MSHCP, mapping of riparian, riverine, vernal pools, and other potentially jurisdictional wetland areas is required. The riparian/riverine policy calls for avoidance and minimization of impacts to wetland habitat throughout the Plan Area in accordance with existing regulatory standards that call for conservation and mitigation of wetland functions and values. Together, the inclusion of substantial acreages of wetland vegetation communities within the MSHCP Conservation Area and implementation of the Riparian/Riverine/

Vernal Pool policy incorporated in the MSHCP would reduce identified impacts to wetland vegetation communities to a level below significance.

Direct and indirect impacts on sensitive vegetation communities and covered species, including species and habitats associated with wetlands and other waters, are reduced through implementation of the MSHCP, which includes assembly of an approximately 202,340 ha (500,000 ac) reserve system, adaptive management and monitoring, as well as other protection measures.

The MSHCP includes coverage of a regional transportation corridor upon which the project alternatives for the MCP have been developed. An amendment to the MSHCP would be required to provide coverage to a modified alignment for the transportation corridor. This discussion is provided as a supplemental environmental analysis to provide coverage under CEQA and NEPA for an amendment to the MSHCP that would be pursued for the selected alignment. It should be noted that this discussion pertains specifically to the analysis of consistency for Alternative 9 TWS DV, which has been identified as the Locally Preferred Alternative. If a different alternative were to be pursued for coverage, additional CEQA/NEPA analysis may be needed.

Section 3.17 contains a detailed analysis of the effects of providing coverage of Alternative 9 TWS DV under the MSHCP, pursuant to the specific criteria identified in the MSHCP to demonstrate consistency. As noted in Section 3.17, a consistency determination is not being made at this time. However, the analysis contained in Section 3.17 provides a framework for consistency and identifies the environmental effects of MSHCP coverage for Alternative 9 TWS DV. The criteria addressed in that analysis includes consideration of impacts on species and habitats that are associated with wetlands and other waters. The finding of the analysis in Section 3.17 is that Alternative 9 TWS DV, including the mitigation lands that are available to demonstrate consistency with the MSHCP, provides an equivalent or superior level of conservation compared with what was anticipated and analyzed in the MSHCP EIR/EIS. Therefore, an amendment to the MSHCP to provide coverage for Alternative 9 TWS DV would not result in impacts on wetlands or other waters beyond that previously analyzed in the MSHCP EIR/EIS.

### **3.18.3.2 Temporary Impacts**

#### ***Build Alternatives***

Table 3.18.G shows the area of temporary impacts to wetlands and nonwetland waters under USACE jurisdiction. Table 3.18.H shows the area of temporary impacts to CDFG jurisdictional areas by land use. The impacts summarized in the tables below take into consideration jurisdictional areas avoided by the construction of bridges and exclude areas that will be impacted by the State Route 79 (SR-79) project prior to the construction of the MCP project.

Impacts to jurisdictional areas and riparian habitats spanned by bridges were calculated with the assumption that 10 percent of the bridged areas would be permanently impacted. Permanent impacts (consisting of the bridge supports) will likely be less than 10 percent of the bridged areas; however, since the specific location of the bridge supports are not yet determined, permanent impacts were calculated conservatively. Impacts were calculated with the assumption that the remaining 90 percent of the bridged areas would consist of temporary impacts.

Typically, temporary impacts also include an approximate 9-meter (m) (30-foot [ft]) buffer (not exceeding the project footprint) for the construction of bridge structures. Additional areas, based on grading plans, that the project engineer determined would be avoided or would consist of temporary impacts were also assessed individually for each bridge location. These bridges are summarized in the table “Mid County Parkway – Summary of Bridge Descriptions and Avoidance of Jurisdictional Areas” found in Appendix I, Attachment D.

#### ***No Build Alternatives***

Under Alternative 1A, the planned street network would be constructed, except for improvements to Cajalco Road and Ramona Expressway. Because Cajalco Road and Ramona Expressway would remain as they are today, there would be no temporary impacts to wetlands and other waters along these roadways under Alternative 1A. Therefore, temporary impacts to wetlands and other waters in the vicinity of Cajalco Road and Ramona Expressway would be less for Alternative 1A than for under the MCP Build Alternatives.

**Table 3.18.G Temporary Impacts to USACE Jurisdictional Areas**

Alternative/DV	Temporary Impacts, ha (ac)		
	Wetlands	Nonwetlands	USACE Total
Alt. 4 Base Case	2.2 (5.4)	1.8 (4.4)	3.9 (9.8)
Alt. 4 SJN DV	1.2 (2.9)	1.8 (4.4)	3.0 (7.3)
Alt. 4 TWS DV	2.2 (5.4)	1.8 (4.4)	4.0 (9.8)
Alt. 5 Base Case	1.9 (4.6)	1.4 (3.5)	3.3 (8.2)
Alt. 5 SJN DV	0.9 (2.2)	1.4 (3.5)	2.3 (5.8)
Alt. 5 TWS DV	1.9 (4.6)	1.4 (3.6)	3.3 (8.2)
Alt. 6 Base Case	2.3 (5.7)	1.9 (4.7)	4.2 (10.4)
Alt. 6 SJN DV	1.3 (3.3)	1.9 (4.7)	3.2 (8.0)
Alt. 6 TWS DV	2.3 (5.7)	1.9 (4.7)	4.2 (10.5)
Alt. 7 Base Case	2.0 (5.0)	1.6 (3.8)	3.6 (8.9)
Alt. 7 SJN DV	1.1 (2.6)	1.6 (3.8)	2.6 (6.4)
Alt. 7 TWS DV	2.0 (5.0)	1.6 (3.9)	3.6 (8.9)
Alt. 9 Base Case	1.8 (4.5)	1.6 (4.0)	3.5 (8.6)
Alt. 9 RD DV	1.6 (3.9)	1.4 (3.5)	3.0 (7.4)
Alt. 9 PP-E DV	1.8 (4.5)	1.6 (4.0)	3.5 (8.6)
Alt. 9 SJN DV	0.9 (2.1)	1.6 (4.0)	2.5 (6.1)
Alt. 9 TWS DV	1.8 (4.5)	1.6 (4.0)	3.5 (8.6)

Source: *Natural Environment Study*, LSA Associates, Inc. 2008.

ac = acres

Alt. = Alternative

DV = Design Variation

ha = hectares

PP-E = Placentia Avenue/Perris Boulevard Elevated Grade

RD = Rider Street

SJN = San Jacinto North

TWS = Temescal Wash Area

USACE = United States Army Corps of Engineers

**Table 3.18.H Temporary Impacts to CDFG Jurisdictional Areas by Land Use Category**

NOTE: Impacts to CDFG jurisdictional areas generally encompass USACE jurisdictional areas.

Alternative/DV	Temporary Impacts, ha (ac)									
	Alkali Grassland/ Playa	Developed/ Ruderal	Field Croplands	Marsh	Non-Native Grassland	Riparian Forest	Riparian Scrub	Riversidean Alluvial Fan Sage Scrub	Riversidean Sage Scrub	Total Temporary Impacts
Alt 4 Base Case	0.02 (0.06)	1.93 (4.77)	0.12 (0.30)	0.09 (0.22)	0.13 (0.32)	1.27 (3.13)	0.41 (1.02)	0.00 (0.00)	0.06 (0.15)	4.0 (10.0)
Alt 4 SJN DV	0.01 (0.03)	1.79 (4.42)	0.08 (0.20)	0.09 (0.22)	0.13 (0.32)	0.40 (0.98)	0.42 (1.05)	0.00 (0.00)	0.06 (0.15)	3.0 (7.4)
Alt 4 TWS DV	0.02 (0.06)	1.91 (4.72)	0.12 (0.30)	0.09 (0.22)	0.13 (0.32)	1.27 (3.13)	0.41 (1.02)	0.00 (0.00)	0.06 (0.15)	4.0 (9.9)
Alt 5 Base Case	0.02 (0.06)	1.35 (3.34)	0.13 (0.32)	0.09 (0.22)	0.13 (0.32)	1.27 (3.13)	0.41 (1.02)	0.00 (0.00)	0.06 (0.15)	3.5 (8.6)
Alt 5 SJN DV	0.01 (0.03)	1.21 (2.98)	0.09 (0.22)	0.09 (0.22)	0.13 (0.32)	0.40 (0.98)	0.42 (1.05)	0.00 (0.00)	0.06 (0.15)	2.4 (6.0)
Alt 5 TWS DV	0.02 (0.06)	1.33 (3.29)	0.13 (0.32)	0.09 (0.22)	0.13 (0.32)	1.27 (3.13)	0.41 (1.02)	0.00 (0.00)	0.06 (0.15)	3.4 (8.5)
Alt 6 Base Case	0.02 (0.06)	1.97 (4.88)	0.12 (0.30)	0.09 (0.22)	0.24 (0.60)	1.49 (3.69)	0.64 (1.58)	0.12 (0.29)	0.13 (0.32)	4.8 (11.9)
Alt 6 SJN DV	0.01 (0.03)	1.83 (4.53)	0.08 (0.20)	0.09 (0.22)	0.24 (0.60)	0.62 (1.53)	0.65 (1.61)	0.12 (0.29)	0.13 (0.32)	3.8 (9.3)
Alt 6 TWS DV	0.02 (0.06)	1.95 (4.83)	0.12 (0.30)	0.09 (0.22)	0.24 (0.60)	1.49 (3.69)	0.64 (1.58)	0.12 (0.29)	0.13 (0.32)	4.8 (11.9)
Alt 7 Base Case	0.02 (0.06)	1.39 (3.44)	0.13 (0.32)	0.09 (0.22)	0.24 (0.60)	1.49 (3.69)	0.64 (1.58)	0.12 (0.29)	0.13 (0.32)	4.2 (10.5)
Alt 7 SJN DV	0.01 (0.03)	1.25 (3.09)	0.09 (0.22)	0.09 (0.22)	0.24 (0.60)	0.62 (1.53)	0.65 (1.61)	0.12 (0.29)	0.13 (0.32)	3.2 (7.9)
Alt 7 TWS DV	0.02 (0.06)	1.37 (3.39)	0.13 (0.32)	0.09 (0.22)	0.24 (0.60)	1.49 (3.69)	0.64 (1.58)	0.12 (0.29)	0.13 (0.32)	4.2 (10.5)
Alt 9 Base Case	0.02 (0.06)	1.77 (4.38)	0.13 (0.32)	0.09 (0.22)	0.13 (0.32)	0.91 (2.24)	0.41 (1.02)	0.00 (0.00)	0.00 (0.00)	3.5 (8.6)
Alt 9 RD DV	0.02 (0.06)	0.71 (1.76)	0.04 (0.10)	0.09 (0.22)	0.13 (0.32)	0.91 (2.24)	0.41 (1.02)	0.00 (0.00)	0.00 (0.00)	2.3 (5.7)
Alt 9 PP-E DV	0.02 (0.06)	1.78 (4.39)	0.13 (0.32)	0.09 (0.22)	0.13 (0.32)	0.91 (2.24)	0.41 (1.02)	0.00 (0.00)	0.00 (0.00)	3.5 (8.6)
Alt 9 SJN DV	0.01 (0.03)	1.63 (4.03)	0.09 (0.22)	0.09 (0.22)	0.13 (0.32)	0.04 (0.09)	0.42 (1.05)	0.00 (0.00)	0.00 (0.00)	2.4 (6.0)
Alt 9 TWS DV	0.02 (0.06)	1.75 (4.33)	0.13 (0.32)	0.09 (0.22)	0.13 (0.32)	0.91 (2.24)	0.41 (1.02)	0.00 (0.00)	0.00 (0.00)	3.4 (8.5)

Source: LSA 2008.

ac = acres  
 Alt = Alternative  
 CDFG = California Department of Fish and Game  
 DV = Design Variation  
 ha = hectares

PP-E = Placentia Avenue/Perris Boulevard Elevated Grade  
 RD = Rider Street  
 SJN = San Jacinto North  
 TWS = Temescal Wash Area

### 3.18.4 Avoidance, Minimization, and/or Mitigation Measures

Initial design of the MCP Build Alternatives focused on avoidance of waters and wetlands while still meeting Caltrans geometric design standards. The USACE Special Area Management Plan (SAMP) data for this area were initially used, which provided a landscape-level view of the waters and wetlands within the composite project footprint. The MCP Build Alternatives were aligned to avoid these areas as much as possible. In locations where full avoidance alignments were not practical, bridges and, in some cases, retaining walls were used to avoid the waters and wetlands. When the draft *Jurisdictional Delineation and Assessment Report* was completed, the project-specific data were compared with the SAMP data to ensure waters and wetlands were avoided as much as possible. A summary table of bridge descriptions and avoidance of jurisdictional areas is included in Appendix I, Attachment D.

Mitigation to ensure that impacts to riparian/riverine areas (which encompass CDFG and USACE jurisdictional areas) are mitigated sufficiently pursuant to Section 6.1.2 of the western Riverside County MSHCP will also sufficiently mitigate for impacts to jurisdictional areas. A Conceptual Mitigation Plan identifying mitigation ratios, locations, and performance standards is provided in Appendix Q of this EIR/EIS. This Conceptual Mitigation Plan would apply to any of the MCP Build Alternatives, but the actual combination of on-site versus off-site mitigation would vary between alternatives. Prior to the initiation of construction, the RCTC will obtain a Determination of Biologically Equivalent or Superior Preservation (DBESP), as required under the MSHCP.

**WET-1** Prior to construction, the Riverside County Transportation Commission (RCTC) shall obtain a Section 404 permit from the United States Army Corps of Engineers (USACE), a Section 1602 Agreement for Streambed Alteration from the California Department of Fish and Game (CDFG), and a Section 401 water quality certification or waiver from the Santa Ana Regional Water Quality Control Board (RWQCB). Specific mitigation requirements shall be negotiated with each agency during the permit process and shall incorporate approaches and measures identified in the Conceptual Mitigation Plan (Appendix Q) and those described below.

**WET-2** Prior to and during construction, the Riverside County Transportation Commission (RCTC) will mitigate permanent impacts to wetlands at a minimum ratio of 1.5:1 in order to achieve no net loss of wetlands. Mitigation will occur through habitat restoration and/or enhancement of on-site areas along the length of the Mid County Parkway (MCP) to the extent practical. If it is infeasible to mitigate entirely on site, in accordance with the Conceptual Mitigation Plan, alternative off-site mitigation would occur. Off-site mitigation such as enhancement, creation, and restoration would occur. Mitigation for temporal loss of habitat value and other compensatory mitigation beyond the basic 1.5:1 replacement ratio could then occur through purchase of mitigation bank credits for removal of giant reed (*Arundo donax*) from a location approved by the United States Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) under guidelines described by the resource and regulatory agencies through the permitting process, or through participation in another approved habitat mitigation bank. The actual amount of mitigation will be determined in coordination with the resource and regulatory agencies based on the quality and quantity of jurisdictional resources to be affected with consideration of the results from the study entitled *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (ERDC 2008).

Temporary impacts to USACE jurisdictional areas will be mitigated at a 1:1 replacement ratio on site through revegetation efforts or through an approved mitigation bank.

**WET-3** Prior to and during construction, the Riverside County Transportation Commission (RCTC) will mitigate impacts to aquatic resources (i.e., nonwetland aquatic habitat such as deep streams and ponds without hydrophytic vegetation) at a minimum ratio of 3:1. Mitigation will occur through habitat restoration and/or enhancement of on-site areas along the length of the Mid County Parkway (MCP) to the extent practical. If it is infeasible to mitigate entirely on site, in accordance with the Conceptual Mitigation Plan, alternative off-site mitigation would occur. Off-site mitigation such as enhancement, creation, and



restoration would occur. Mitigation for temporal loss of habitat value and other compensatory mitigation beyond the basic 1:1 replacement ratio could then occur through purchase of mitigation bank credits for removal of giant reed (*Arundo donax*) from a location approved by the United States Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) under guidelines described by the resource and regulatory agencies through the permitting process, or through participation in another approved habitat mitigation bank. The actual amount of mitigation will be determined in coordination with the resource and regulatory agencies based on the quality and quantity of jurisdictional resources to be affected with consideration of the results from the study entitled *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (ERDC 2008). Temporary impacts to aquatic areas will be mitigated at a 1:1 replacement ratio on site through revegetation efforts or through an approved mitigation bank.

**WET-4**

During final design, the Riverside County Transportation Commission (RCTC) will develop a Habitat Mitigation Monitoring Plan (HMMP) to restore impacted riparian habitats and shall incorporate the applicable approaches and measures identified in the Conceptual Mitigation Plan (Appendix Q). The HMMP will be subject to United States Army Corps of Engineers (USACE) and California Department of Fish and Game (CDFG) approval. The HMMP will, at a minimum, meet the following requirements:

- A habitat replacement and/or enhancement ratio of at least 1:1 for temporary impacts, 1.5:1 for permanent impacts to wetlands, and 3:1 for permanent impacts to nonwetland aquatic resources;
- A success criterion of at least 80 percent cover of native riparian vegetation for replaced habitat; and
- Additional requirements, including a 3-year establishment period for the replacement habitat, regular trash removal, and regular maintenance and monitoring activities to ensure the success of the mitigation plan.

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