3.16 NATURAL COMMUNITIES

This section analyzes the anticipated impacts of the proposed I-710 Corridor Project on natural communities and is based on the *Natural Environment Study* (NES; January 2012) and the *Jurisdictional Delineation Report* (May 2012). This section includes a discussion of natural communities of concern, habitat fragmentation, wildlife corridors, and Habitat Conservation Plans.

3.16.1 REGULATORY SETTING

This section of the document discusses natural communities of concern. The focus of this section is biological communities, not individual plant or animal species. This section focuses on the ecological function of natural communities within the I-710 Corridor Project Study Area. This section also includes information on habitat conservation plans, wildlife corridors, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily movement. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in Section 3.20, Threatened and Endangered Species. Wetland and other waters are discussed in Section 3.17.

3.16.1.1 HABITAT CONSERVATION PLANS AND NATURAL COMMUNITIES CONSERVATION PLANS

Habitat Conservation Plans are prepared pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA) in order to conserve habitat and obtain incidental take[1] permits for take of threatened and endangered fish and wildlife species. The State process of issuing an incidental take[2] permit under the California Endangered Species Act (CESA) can complement the Federal Habitat Conservation Plan process and may include the same or similar species, depending on their status. As provided in Section 2835 of the California Fish and Game Code, the California Department of Fish and Game (CDFG) may permit the take of any identified species whose conservation and management is provided for in a CDFG-approved Natural Communities Conservation Plan. A Natural Communities Conservation Plan identifies and provides for the regional or areawide protection of plants, animals, and their habitats while

[1] "Take" is defined under FESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

[2] "Take" is defined by the California Fish and Game Code as "to hunt, pursue, catch, capture, or kill or to attempt to hunt, pursue, catch, capture, or kill."

allowing compatible and appropriate economic activity. Sections 2081(b) and 2081(c) of CESA allow the CDFG to issue an incidental take permit for State-listed threatened and endangered species.

No Habitat Conservation Plans or Natural Communities Conservation Plans are within the I-710 Corridor Project study area and are, therefore, not applicable to the proposed project.

3.16.2 Affected Environment

3.16.2.1 Biological Study Area

The "Biological Study Area" (BSA) is the area assessed for biological resources. The BSA is approximately 18 linear miles along the I-710 Corridor, from Ocean Blvd. to State Route 60 (SR-60). The BSA also includes a portion of major transportation corridors connecting to I-710, including Interstate 405 (I-405), State Route 91 (SR-91), Interstate 105 (I-105), and Interstate 5 (I-5), to accommodate the proposed interchange improvements. Additionally, the BSA includes improvements to 42 local arterial intersections that would improve intersection operations. The BSA encompasses approximately 2,000 acres and is shown in Appendix S of this Draft EIR/EIS.

3.16.2.2 Plant Communities

Project-specific mapping of plant communities in the BSA was conducted in order to provide finer detail and greater accuracy than provided by the available general vegetation mapping of the BSA. Land cover categories used for mapping were also project-specific and are defined below. Land uses/vegetation communities located within the BSA are mostly developed (developed/ornamental/ruderal). Waters of the Los Angeles River have been identified based on freshwater and tidal waters. Fragments of riparian scrub and freshwater emergent marsh habitats have been identified within the BSA within the Los Angeles River itself or within tributary drainages. All of the areas identified as a natural community of concern were disturbed from regular flood control maintenance, homeless encampments, and intrusion by nonnative species. Table 3.16-1 lists the acreage of each of the vegetation communities present within the BSA. Land uses/vegetation communities and associated drainage boxes[1] identified within the BSA are illustrated in Appendix S of this Draft EIR/EIS.

[1] The delineation of drainage boxes identifies the locations of drainage features on the figures. Numbering of drainage boxes was initiated during preparation of the Jurisdictional Delineation. The Los Angeles River and some areas with riparian scrub habitat were not assigned a drainage box number.

Table 3.16-1 Acreages of Land Use Vegetation/Communities Occurring within the Biological Study Area

Natural Community	Total Acres	Drainage Box
Developed/Ornamental/Ruderal	1,919.97	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20
Estuarine Habitat		
Earthen-Bottom Tidal Waters of the Los Angeles River	10.90	Los Angeles River, south of Willow St.
Riparian/Riverine Habitats		
Concrete-Lined Freshwater Waters of the Los Angeles River and Associated Drainages	53.91	1, 2, 4, 12, 13, 16, 20, Los Angeles River, north of Willow St.
Riparian Scrub	4.34	Portions of the Los Angeles River, 3 and 6
Freshwater Emergent Marsh	0.93	Portions of 3 and 6
Total	**1,989.48**	**--**

Source: *I-710 Corridor Project Natural Environment Study Report*, January 2012 and *I-710 Corridor Project Jurisdictional Delineation Report*, May 2012.

DEVELOPED/ORNAMENTAL/RUDERAL. This land use consists of developed areas such as existing buildings, paved roads, ornamental vegetation, and commercial and residential properties. These upland disturbed areas are grouped together in the land cover mapping because of their generally low habitat value for native plant and wildlife species.

Human-made roadside drainage ditches (concrete v-ditches with absent or marginal ordinary high water marks [OHWMs], isolated freeway drainages, and isolated earthen swales/erosional features) are constructed in upland areas and are not jurisdictional. Thirteen of the 21 drainage features (Drainage Boxes 3, 5, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, and 19) identified within the BSA are classified under this land use category and described further in the *Jurisdictional Delineation Report* prepared for the project. The locations of these nonjurisdictional drainage features are also shown in Appendices G, I, and J of the NES.

Some of the areas mapped under this land use consist predominantly of unmaintained or ornamental vegetation. Dozens of ornamental and fruit trees occur in yards and landscaping. Plant species within this habitat type include Mexican fan palm (*Washingtonia robusta*), tocalote (*Centauria melitensis*), bull thistle (*Cirsium vulgare*), telegraph weed (*Heterotheca californica*), perennial sow-thistle (*Sonchus arvensis*), black mustard (*Brassica nigra*), shortpod mustard (*Hirschfeldia incana*), Bermuda grass (*Cynodon dactylon*), common wild oat (*Avena fatua*), and foxtail chess (*Bromus madritensis* ssp. *rubens*).

Portions of the developed areas that are not paved or landscaped contain naturalized vegetation dominated by ruderal species. Some of the species most often encountered include

ripgut brome (*Bromus diandrus*), London rocket (*Sisymbrium irio*), musky stork's bill (*Erodium moschatum*), Bermuda grass, Hottentot-fig (*Carpobrotus edulis*), five-hook bassia (*Bassia hyssopifolia*), white sweet-clover (*Melilotus albus*), horseweed (*Conyza* spp.), shortpod mustard, annual bur-sage (*Ambrosia acanthicarpa*), rough cocklebur (*Xanthium strumarium*), common knotweed (*Polygonum arenastrum*), and spearscale (*Atriplex triangularis*).

EARTHEN-BOTTOM TIDAL WATERS OF THE LOS ANGELES RIVER. Tidal influence on the Los Angeles River extends north from Queensway Bay to the Willow St. Bridge over the Los Angeles River (MBC Applied Environmental Sciences 1994). Intertidal portions of the shoreline extend from the extreme low to the extreme high water mark, while subtidal areas lie below the extreme low tide zone and are never exposed. The Los Angeles River estuary at this location has a natural soft bottom composed of sands and muds. Between Anaheim St. and Shoemaker Bridge, protective riprap cover lines the margins of the river. The halophytic (salt-loving) vegetation found in the estuarine wetland provides a valuable function to the overall wetland system by anchoring soils and controlling erosion. During surveys conducted in October 2009, intertidal areas of riprap consisted of relatively low species diversity and included barnacles (*Balanus amphitrite* and *B. glandula*), mussels (*Mytilus galloprovincialis* and *Geukensia demissa*), a green algae (*Ulva* sp.), and a filamentous red algae turf. Barnacles existed at the bridge abutments. No rooted eelgrass or kelp forests were observed at that time in the BSA.

Human-made structures (dikes and weirs) and boulders provide roosting habitat for shorebirds, seabirds, and waterfowl during low flow periods. The rocky tidal portion of the BSA is not considered a sensitive habitat because of the highly variable salinity and temperature regimes and the presence of river-borne sediments that silt over the low-lying riprap.

CONCRETE-LINED FRESHWATER WATERS OF THE LOS ANGELES RIVER AND ASSOCIATED DRAINAGES. These human-made jurisdictional areas were identified within the Los Angeles River north of the Willow St. crossing and within unvegetated v-ditches or rectangular channels adjacent to the Los Angeles River. They typically were unvegetated due to the concrete lining. Islands of sand, rock, or silt are occasionally found upstream of Willow St. and can be colonized by riparian plants that are covered during flood periods. These islands either shift position or are washed away during high flow events.

RIPARIAN SCRUB. Riparian scrub habitat is sporadic within the BSA and is located along the margins of Compton Creek, within vegetated areas of the Los Angeles River margins south of Willow St. and northeast of the I-710/Rosecrans Ave. interchange. Riparian scrub lines the shoreline primarily between Willow St. and Pacific Coast Hwy. Between Anaheim St. and Shoemaker Bridge, the riparian margins of the river decrease and protective riprap cover lines the margins of the river. This habitat is disturbed by litter and human intrusion and is cleared annually (at a minimum) for flood control purposes. Dominant species in riparian scrub include

mulefat (*Baccharis salicifolia*), poison hemlock (*Conium maculatum*), broad-leaved peppergrass (*Lepidium latifolium*), Goodding's willow (*Salix gooddingii*), narrowleaf willow (*Salix exigua*), western goldenrod (*Euthamia occidentalis*), and Fremont's cottonwood (*Populus fremontii*). Weedy species commonly observed include giant reed (*Arundo donax*), common sunflower (*Helianthus annuus*), and small stands of marsh species such as common bulrush (Typha latifolia) and cattails (*Typha* sp.).

FRESHWATER EMERGENT MARSH. This habitat has been highly affected by the human environment, much like the riparian scrub habitat described above. Freshwater marsh habitat has been identified in the bed of Compton Creek and in an area surrounding riparian scrub habitat associated with the vegetated basin. Regular maintenance associated with flood control generally prevents the vegetation from becoming mature. Dominant species found in freshwater marsh habitat include California bulrush (*Schoenoplectus californicus*), swamp smartweed (*Persicaria hydropiperoides*), cattails, and primrose-willow (*Ludwigia* sp.).

3.16.2.3 WILDLIFE CORRIDORS/HABITAT FRAGMENTATION

Many wildlife species require large areas of habitat to forage for food, find burrowing/denning or nesting sites, and to breed. Corridors linking areas of suitable habitat are important because they provide useful habitat and allow movement of wildlife from one area to another. Corridors are often used by juveniles dispersing to new territories. This avoids intraspecific competition in existing habitats and allows the recolonization of areas from which animals have become extirpated.

Wildlife crossings are generally structural passages beneath or above roadways. "Wildlife crossing" is the umbrella term encompassing underpasses, overpasses, and culverts. All of these structures provide seminatural corridors above or below roads, and in some cases adjacent to roads, so that animals can safely cross without endangering themselves and motorists. Species of primary interest in wildlife corridor assessment for the I-710 Corridor Project are medium-sized mammals, such as coyote (*Canis latrans*) and bobcat (*Lynx rufus*).

Existing roadways and associated fencing within the I-710 Corridor BSA, which impede wildlife movement, have long been in place and add to habitat fragmentation. Although existing roads do not necessarily function as complete barriers to wildlife movement, they represent a constraint to that movement. Nevertheless, the Los Angeles River and adjacent parks, wetlands, and vacant lands do provide a long linear stretch of habitat suitable for wildlife movement, including many species of water birds and medium-sized mammals such as coyotes.

Additionally, the cement-lined freshwater and earthen-bottom tidal water parts of the Los Angeles River provide opportunity for some fish movement. Discussion of the use of the Los Angeles River by fish is discussed in Section 3.20, Threatened and Endangered Species.

3.16.3 Environmental Consequences

3.16.3.1 Permanent Impacts

For the purposes of impact analysis, a conservative right-of-way footprint was established for each build alternative based on preliminary engineering plans 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, this revegetation may not fully restore the functions and values of the impacted habitat.

Where preliminary plans showed the placement of columns/piers or other roadway features, a direct permanent impact was assumed. Indirect permanent 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. In general, Alternatives 6A/B/C will have greater impacts to natural communities of concern than Alternative 5A because of their larger right-of-way footprint.

Build Alternatives. Permanent direct and indirect impacts to natural communities of concern by build alternative are provided in Table 3.16-2 and discussed in more detail below.

Estuarine Habitat. As shown in Table 3.16-2, Alternatives 5A, and 6A/B/C are expected to result in direct permanent effects to approximately 0.10 acre of estuarine habitat because the proposed improvements to the four bridges that are located within tidal waters are the same for Alternatives 5A and 6A/B/C. Permanent impacts would result from the construction of abutments and driving of piles. Permanent effects to the estuarine environment will include a reduction in soft-bottom habitat as a consequence of placement of piers and abutments.

In addition to direct permanent effects, the build alternatives would result in indirect permanent effects to 2.18 acres of estuarine habitat. Indirect permanent effects would result from permanent shading associated with bridges or elevated roadways. In addition, construction may indirectly affect estuarine habitats permanently through enhancing the germination and proliferation of nonnative invasive plant species. Potential hydraulic effects are associated with bridge modifications and the relocation of a segment of electrical transmission lines along the edge of the river, upstream. However, as analyzed in Section

Table 3.16-2 Project Effects to Vegetation Communities Occurring within the Biological Study Area

Natural Community	Total Acres within BSA	Permanent (Direct)		Permanent (Indirect)		Temporary		Total	
		Alt 5A	Alts 6A/B/C	Alt 5A	Alts 6A/B/C	Alt 5A	Alts 6A/B/C	Alt 5A	Alts 6A/B/C
Estuarine Habitat									
Earthen-bottom Intertidal portions of the Los Angeles River	10.33	0.10	0.10	2.18	2.18	8.05	8.05	10.33	10.33
Riparian/Riverine Habitats									
Dominguez Gap Wetlands west basin	8.57	0.00	2.81	0.00	0.00	0.00	5.76	0.00	8.57
Concrete-lined Freshwater portions of the Los Angeles River	53.91	0.82	1.03	10.57	12.88	28.70	31.57	40.09	45.48
Marsh	0.93	0.00	0.02	0.28	0.44	0.32	0.36	0.60	0.82
Riparian Scrub	2.88	0.02	0.12	0.43	0.71	2.98	2.05	3.43	2.88
Total Riparian/ Riverine Habitats	**66.29**	**0.84**	**3.98**	**11.28**	**14.03**	**32.00**	**39.74**	**44.12**	**57.75**

Source: *Natural Environment Study,* 2012.
Alt/Alts = Alternative/s
BSA = Biological Study Area

3.8 of this Draft EIR/EIS, the proposed modifications would mimic the existing pier configurations upstream and downstream, and there would not be substantial effects to the water surface elevation, velocity of flood flows, sedimentation, or scour in the vicinity of the new piers. Because there are no substantial effects at the location of the modifications, there are no substantial effects to downstream locations, including the estuarine habitat.

RIPARIAN/RIVERINE HABITATS. This category includes concrete-lined freshwater waters of the Los Angeles River and associated tributaries, the Dominguez Gap Wetland, riparian scrub, and freshwater emergent marsh. The I-710 Corridor Project would result in direct and indirect permanent effects to riparian/riverine habitats through disturbance and/or removal of existing vegetation. Furthermore, construction may indirectly affect riparian/riverine habitats permanently through shading of the areas below bridges or elevated roads and enhancing the germination and proliferation of nonnative invasive plant species, as described in more detail in Section 3.21.

Permanent impacts to riparian/riverine habitats would be greater under Alternatives 6A/B/C than under Alternative 5A. As shown in Table 3.16-2, Alternatives 6A/B/C are expected to result in direct permanent effects to 3.98 acres and indirect permanent effects to 14.03 acres of riparian/riverine natural communities. Alternative 5A would result in permanent direct impacts to 0.84 acre and permanent indirect impacts to 11.28 acres of riparian/riverine habitats. The figures in Appendices I and J of the NES illustrate the locations where riparian/riverine habitats would be impacted by Alternatives 5A and 6A/B/C, respectively.

Riparian/riverine habitat at the following three locations would be impacted as follows under Alternatives 6A/B/C but not under Alternative 5A:

- Permanent impacts would occur to freshwater emergent marsh and riparian scrub habitats during construction of the elevated freight corridor over Drainage Box 3 (see Sheet 4 of Appendix I of the NES).

- Eight piers/columns would be driven within freshwater waters of the Los Angeles River at the location of the SR-91 crossing of freshwater portions of the Los Angeles River (see Sheet 7 of Appendix I of the NES).

- Six additional piers/columns would be constructed within the low-flow channel of freshwater waters of the Los Angeles River, and five piers/columns would be added within the upper concrete banks of the river (see Sheet 9 of Appendix I of the NES).

Existing or proposed wetland restoration areas identified in the BSA may be affected by the I-710 Corridor Project. The Los Angeles County Department of Public Works identified the boundaries of County restoration areas (Rivera [December 30, 2009] and Su [January 11, 2009], personal communication). Two areas were found to overlap the limits of the BSA. The Dominguez Gap Wetlands west basin restoration area would be impacted by the freight corridor proposed in Alternatives 6A/B/C. Furthermore, the BSA boundaries of all alternatives overlap with the DeForest Park Restoration Project, although within the BSA, none of the build alternatives are expected to impact the DeForest Park Restoration Project. However, construction within the Dominguez Gap Wetlands west basin restoration area would have permanent, temporary, and indirect effects, as shown in Table 3.16-2 above.

WILDLIFE CORRIDORS/HABITAT FRAGMENTATION. Wildlife movement across I-710 in the BSA has been substantially constrained for many years by the urbanized nature of the area as well as by human-made barriers (lack of suitable vegetative cover, existing roadways, stormwater conveyance structures, and fencing). The urban setting of the BSA provides limited opportunities for habitat continuity. Nevertheless, the Los Angeles River and adjacent parks, wetlands, and vacant lands do provide a long linear stretch of habitat suitable for

wildlife, including many species of water birds and medium-sized adaptable mammals such as coyotes. The I-710 Corridor Project would result in some loss of vacant land but would not increase habitat fragmentation or impede the movement of wildlife in the area. Habitat within the Los Angeles River channel and movement opportunities therein would not be affected by project implementation because the I-710 Corridor Project essentially modifies an existing transportation facility.

Because the I-710 Corridor has restricted wildlife movement and resulted in habitat fragmentation for many years, none of the build alternatives are expected to have an adverse effect on wildlife movement. Nonetheless, Alternatives 6A/B/C will have a greater impact on wildlife corridors/habitat fragmentation than Alternative 5A due to the larger footprint of the freight corridor associated with Alternatives 6A/B/C.

NO BUILD ALTERNATIVE. Under Alternative 1, the I-710 Corridor Project would not be constructed. There would be no permanent direct or indirect impacts to natural communities from Alternative 1.

3.16.3.2 PUBLIC HEALTH CONSIDERATIONS

No public health considerations were identified relative to project impacts on natural communities, wildlife corridors, or habitat fragmentation.

3.16.4 AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Measures to avoid, minimize, mitigate, and compensate for permanent impacts to natural communities of concern are described below. Related measures are also provided in Sections 3.6, 3.19 through 3.21.

The majority of existing estuarine and riparian/riverine habitats fall under the regulatory jurisdiction of USACE pursuant to Section 10 of the Rivers and Harbors Act of 1899 (RHA) and Section 404 of the Clean Water Act (CWA). Most of the impacts to USACE jurisdictional waters as a result of the I-710 Corridor Project would occur above the high tide line. Therefore, the impacts are anticipated to be primarily to waters under the jurisdiction of Section 404. Compensatory mitigation for estuarine and riparian/riverine habitats would be required to comply with Section 404 of the CWA. Typically, estuarine and riparian/riverine habitats subject to USACE jurisdiction is mitigated at a minimum mitigation-to-effect ratio of 2:1 for permanent effects and 1:1 for temporary effects, which is consistent with the USACE policy of no net loss of estuarine and riparian/riverine habitats (e.g., wetlands). Compensatory mitigation may be in the form of habitat restoration and/or enhancement in on- or off-site areas where similar estuarine habitat exists.

Final details for compensatory mitigation would be evaluated through coordination between Caltrans and the resource agencies. Compensatory mitigation may be in the form of habitat restoration and/or enhancement in on- or off-site areas where similar riparian habitat exists, or a monetary contribution toward an in-lieu fee program, acceptable by the regulatory agencies. Areas within or directly adjacent to the BSA may offer mitigation options. Online research (The River Project 2009; Los Angeles County 2009) and communication with agency representatives (L. Torres [December 8, 2009] [Rivers and Mountains Conservancy], J. Casanova [December 4, 2009] [Los Angeles River and San Gabriel Rivers Watershed Council], and D. Rivera [December 30, 2009] [Los Angeles County Department of Public Works], personal communication) revealed that a number of restoration opportunities, some still in progress, exist in the vicinity. Portions of the completed Dominguez Gap Wetlands restoration area lie within the BSA. Among other options, compensation for I-710 Corridor Project effects to tidal waters may be provided by providing additional funding for the Golden Shore Marine Preserve (Long Beach Natural Areas 2009). The Compton Creek Improvement Project is in progress and may provide a compensatory mitigation opportunity for riparian scrub and/or freshwater emergent marsh.

The following measure shall apply to all build alternatives:

NC-1 The California Department of Transportation (Caltrans) shall prepare a Habitat Mitigation Monitoring Plan (HMMP) that shall comply with all terms and conditions set forth in the permits and opinions issued by the resource agencies and shall include the following provisions:

- Permanent effects to native habitat shall be replaced with in-kind habitat on or off site at a minimum 2:1 mitigation-to-effect ratio. Temporary effects to native vegetation shall be replaced at a minimum 1:1 ratio with in-kind habitat restored in place within the Biological Study Area (BSA). If off-site restoration is conducted, it shall be done within the same watershed as the Interstate 710 (I-710) Corridor Project.

- The HMMP shall identify a success criterion of at least 80 percent cover of native riparian vegetation or composition structure similar to existing adjacent high-quality riparian vegetation.

- Further criteria specified in the HMMP shall include an establishment period for the replacement habitat, regular trash removal, and regular maintenance and monitoring activities to ensure the success of the mitigation plan. After construction, annual summary reports of the biological monitoring shall be provided to the United States Army Corps of

Engineers (USACE), the California Department of Fish and Game (CDFG), and the United States Fish and Wildlife Service (USFWS) documenting the monitoring effort. The duration of the monitoring and reporting shall be established by resource agency permit conditions.

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