



5.7 BIOLOGICAL RESOURCES

The purpose of this section is to identify existing biological resources on-site and in the vicinity, analyze potential Project-related impacts to these resources (including special status species), and recommend mitigation measures to reduce the significance of any impacts that are identified. Information in this section is based on the *Foothill Parkway Westerly Extension Project Site Biological Technical Report (Biological Technical Report)*, prepared by BonTerra Consulting, dated July 17, 2008, the *Determination of Biologically Equivalent of Superior Preservation for Riparian/Riverine Habitat for Foothill Parkway Extension Project in the City of Corona and Unincorporated Riverside County (DBESP Report)*, prepared by BonTerra Consulting, dated February 14, 2008, the *Foothill Parkway Extension Native Tree Survey (Native Tree Survey)*, prepared by BonTerra Consulting, dated February 15, 2008, and the *Foothill Parkway Westerly Extension Project, Riverside County, California, Delineation of State Federal Jurisdictional Water (Delineation Report)*, prepared by RBF Consulting (RBF), dated September 27, 2007. These documents are included in Appendix 15.7, BIOLOGICAL TECHNICAL REPORT, Appendix 15.8, DETERMINATION OF BIOLOGICALLY EQUIVALENT OF SUPERIOR PRESERVATION, and Appendix 15.9, DELINEATION OF JURISDICTIONAL WATERS. The *Native Tree Survey* is included in Appendix F of the *Biological Technical Report* (refer to Appendix 15.7 of this EIR). The survey area covered by the *Biological Technical Report* includes the proposed alignment area and a 100-foot buffer area adjacent to the alignment (refer to Figure 5.7-1, BIOLOGICAL SURVEY AREA).

This section describes the biological character of the site in terms of vegetation, plant and wildlife species, and wildlife movement, and analyzes the biological significance of the site in relation to Federal, State, and local laws and policies. General and focused surveys of the Project site were conducted by BonTerra Consulting in 1999, 2000, 2006, and 2008; results of these surveys are incorporated herein. In addition, other pertinent information was obtained from studies and other documentation prepared by biologists who have previously conducted research in the immediate vicinity of the Project site, including a Habitat Assessment and focused survey reports prepared for the adjacent Far West Housing project (Gonzales Environmental Consulting, 2006).

There are several sources of information on the status and distribution of special status species in southern California. These sources were reviewed during the preparation of the Biological Technical Report and included the following: (1) the California Department of Fish and Game (CDFG) *Special Vascular Plants, Bryophytes, and Lichens List* and *Special Animals List*, which also includes species listed by the U.S. Fish and Wildlife Service (USFWS) as Threatened and Endangered (CDFG 2008); (2) the California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2008); (3) the CDFG's *California Natural Diversity Database (CNDDDB)* (CDFG 2008a); and (4) the *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*. The habitat requirements and nearby localities were considered when determining the potential for special status species to occur on the Project site.



5.7.1 METHODOLOGY

VEGETATION MAPPING AND GENERAL BOTANICAL SURVEYS

Vegetation mapping and general plant surveys were conducted on October 25 and November 3, 1999 by Senior Botanist Sandra Leatherman and Senior Biologist Brian Daniels of BonTerra Consulting. These surveys were updated by Ms. Leatherman and BonTerra Consulting Ecologist Amber Oneal to reflect current conditions as of June 6, 2006. Additional mapping was conducted on August 1, 2007, by Ms. Leatherman and Ms. Oneal to accommodate minor changes in Project design. More detailed mapping of riparian vegetation types was conducted by Ms. Leatherman and BonTerra Consulting Ecologist Jennifer Pareti on April 22, 2008. The purpose of the surveys was to describe the vegetation present on the Project site and evaluate the potential of the habitats to support special status species. All plant species observed were recorded in field notes (refer to Appendix 15.7).

Each plant species was either identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman (1993), Munz (1974), and Abrams (1923-1951, 1960). Taxonomy follows Hickman (1993) or current scientific journals for scientific and common names. Vegetation on the Project site was classified into vegetation types based on the MSHCP.

GENERAL WILDLIFE SURVEYS

General wildlife surveys were conducted concurrently with the vegetation mapping in 1999 by Mr. Daniels and Ms. Leatherman. These surveys were updated to reflect current conditions as of May 15, 2006. General observations of wildlife were also noted during all focused surveys in 2000 and 2006, during the additional vegetation mapping on August 1, 2007, and during focused surveys in 2008. All wildlife species observed were recorded in field notes (refer to Appendix 15.7).

The purpose of the surveys was to identify the potential of on-site vegetation types to support special status species known or expected to occur in the region. During the surveys, active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. General surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2003) for amphibians and reptiles, American Ornithologists Union (1998) for birds, and Baker et al. (2003) for mammals.

FOCUSED SURVEYS FOR SPECIAL STATUS SPECIES

Special Status Plant Species

Spring botanical surveys were conducted on the Project site on April 24 and 27 and June 7, 2000, by Ms. Leatherman and David Bramlet, Senior Botanist. Spring botanical surveys were repeated on June 22, 2006, by Ms. Leatherman and Ms. Andrea Warniment, Botanist. Prior to the 2006 surveys, known reference populations of the focus study species were visited to ensure timing of the surveys was



Source: Foothill Parkway Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.



CITY OF CORONA
Foothill Parkway Westerly Extension

Back of 11 x 17 page



appropriate. During the surveys, all areas of the Project site containing native habitat potentially suitable for special status plant species were sampled using meandering transects. Field notes were taken during the surveys. The location of each special status plant population found on the Project site was mapped using a geographic positioning system (GPS) unit. Voucher specimens were collected and deposited in the Rancho Santa Ana Botanic Garden or University of California, Riverside, to ensure accuracy in the identification.

Focused surveys to quantify and flag intermediate mariposa lilies (*Calochortus weedii* var. *intermedius*) and Coulter's matilija poppy (*Romneya coulteri*) in preparation for proposed mitigation activities were conducted on May 15 and 22, 2008 by Ms. Leatherman, Ms. Pareti, and BonTerra Consulting Ecologist Allison Rudalevige. Prior to the flagging, a known location of the intermediate mariposa lily and Coulter's matilija poppy within the survey area, were monitored to ensure the plants were blooming. The entire area was then surveyed using meandering transects, concentrating on locations where these species had been observed during previous surveys in 2000 and 2006. The intermediate mariposa lilies were flagged directly adjacent to the plant with green, yellow, or orange pin flags. Red and white striped flagging was placed on the large shrubby Coulter's matilija poppy. One location of each species could not be flagged due to steep slopes and dense vegetation. GPS points for each location were recorded in the field. Results of these surveys are also included in Appendix 15.7.

Arroyo Toad

Focused surveys for the arroyo toad (*Bufo californicus*) were conducted on the Project site on March 17, 28, and 29; April 28; May 18; June 5; and July 3, 2000, by Brian Leatherman, Senior Wildlife Biologist. Focused surveys for the arroyo toad followed the guidelines developed by the USFWS (1999). Surveys were conducted along creek margins in the riparian woodland vegetation. The current USFWS guidelines require that six surveys be conducted at least seven days apart during the breeding season (generally between March 15 and July 1). Each survey includes a daytime and nighttime component. All surveys were conducted under suitable weather conditions. These surveys were not updated during the current surveys because this species is covered by the MSHCP and the Project site is not within the survey area for this species. Arroyo toad is not expected to occur on the Project site due to lack of habitat (i.e., hydrology), and because it was not observed during focused surveys in 2000.

Burrowing Owl

Focused surveys for burrowing owls followed the Burrowing Owl Survey Instructions for the MSHCP Area (County of Riverside 2006). These guidelines outline a survey methodology that includes a habitat assessment, a focused burrow survey, and four focused owl surveys.

A habitat assessment for burrowing owl (*Athene cunicularia*) was conducted on May 4, 2006 by Mr. Daniels and Ms. Oneal. The entire Project site was surveyed for suitable burrowing owl habitat. The majority of the Project site was considered to be unsuitable for the burrowing owl due to steep topography or extensive vegetation



cover. However, suitable habitat (approximately 6.4 acres) was observed in the Mabey Canyon Debris Basin located adjacent to Mabey Canyon Road.

A burrow survey was conducted by Ms. Oneal and Ms. Rudalevige on June 27, 2006 within the survey area considered to be suitable for the species (i.e., Mabey Canyon Debris Basin). Focused surveys were conducted within suitable habitat on the Project site on July 11 and 25, and August 3 and 10, 2006 by Ms. Oneal, with assistance from Ms. Rudalevige, Ms. Pareti, and Intern Beth Cecil. The focused surveys were conducted during the breeding season (March 1 to August 31). The first two focused surveys (July 11 and 25) were conducted in the morning from one hour before sunrise to two hours after sunrise, and the last two surveys (August 3 and 10, 2006) were conducted in the evening from two hours before sunset to one hour after sunset. The burrow survey and focused surveys were conducted by walking in transects to ensure 100 percent visual coverage of suitable habitat on the Project site.

Focused surveys for this species were repeated following the same methodology in 2008. The burrow survey was conducted by Ms. Oneal on April 21 and May 2, 2008. Focused owl surveys were conducted by Ms. Oneal on May 12, June 2, 12, and 23, 2008. All surveys were conducted within two hours of sunrise. The results of these surveys are also included in Appendix 15.7.

Least Bell's Vireo

Focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) were conducted on the Project site on April 13; May 5, 12, and 22; June 1, 16, and 27; and July 10, 2000, by Mr. Leatherman. A total of eight surveys for the least Bell's vireo were repeated on May 4, 15, and 25; June 5, 15, and 27; and July 11 and 25, 2006, by Mr. Daniels and Ms. Oneal. All focused surveys for the least Bell's vireo followed the recommended guidelines of the USFWS (1999) for the species. Updated guidelines for least Bell's vireo surveys were issued on April 8, 1999, and require that at least eight surveys be conducted from April 10 to July 31, with a ten-day interval between each site visit. The surveys were conducted by Mr. Daniels (USFWS Permit Number TE-821401-2) and Ms. Oneal; Ms. Rudalevige and Ms. Cecil also assisted with some of the surveys. Riparian habitats were systematically surveyed by walking slowly and methodically along their margins. The search included the entire Project site. All surveys were conducted under optimal weather conditions and during early morning hours when bird activity is at a peak.

Focused surveys for this species were repeated in 2008 following the same methodology. A total of eight surveys were conducted on April 11, 21; May 2, 12, 22; and June 2, 12, and 23, 2008. All surveys were conducted by Ms. Oneal. The results of these surveys are also included in Appendix 15.7.

NATIVE TREE SURVEY

The Project site was surveyed by BonTerra Consulting Certified Arborist David Hughes with the assistance of Ecologist Kimberly Oldehoeft and Botanist Andrea Edwards on December 5 and 14, 2007, and January 11, 29, and 30, 2008. The survey area was defined as the proposed impact area for the Project with an



additional 100-foot buffer area. Each tree that was surveyed was mapped on a 100-scale (1"=100') aerial photograph in the field. In addition, each tree location was recorded using a hand-held GPS device.

Native tree species assessed during this survey included coast live oak (*Quercus agrifolia*), scrub oak (*Quercus berberidifolia*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), and black willow (*Salix goodingii*). During the survey, each tree was tagged and the following data were collected: trunk diameter at breast height (dbh), tree height, canopy width, aesthetics, and overall health. The data collected are included in Appendix 15.7.

DETERMINATION OF BIOLOGICALLY EQUIVALENT OF SUPERIOR PRESERVATION

A DBESP Report has been prepared to satisfy requirements of the MSHCP for impacts on riparian/riverine resources as a result of the proposed alignment. Riparian/Riverine areas, as defined in Section 6.1.2 of the MSHCP, are “dominated by trees, shrubs, and other vegetation which depend upon soil moisture from a nearby freshwater source.” Comments from the resource agencies (i.e., USFWS and CDFG) were received on April 16, 2008 and have been incorporated herein. The DBESP will be resubmitted to the resource agencies with the proposed Mitigation Plan for review. The resource agencies will review the proposed Project for consistency with the MSHCP.

5.7.2 REGULATORY SETTING

JURISDICTIONAL WATERS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The United States Army Corps of Engineers (USACE) Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. The CDFG regulates activities under the Fish and Game Code Sections 1600-1607 and the Regional Water Quality Control Boards (RWQCBs) regulate activities pursuant to Section 401 of the CWA and the California Porter-Cologne Act.

Army Corps of Engineers (USACE)

The USACE has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The USACE and United States Environmental Protection Agency (EPA) recently clarified and simplified the definition of “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The term “waters of the United States” includes the following:



- ❑ all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;
- ❑ wetlands;
- ❑ all waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;
- ❑ all impoundments of water mentioned above;
- ❑ all tributaries of waters mentioned above;
- ❑ the territorial seas; and
- ❑ all wetlands adjacent to the waters mentioned above.

Under this definition, and in the absence of wetlands, the limits of the USACE's jurisdiction in non-tidal waters extend to the ordinary high water mark (OHWM), which is defined as ". . . *that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a 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* (33 CFR §328.3(e))."

Wetlands, a subset of jurisdictional waters, are jointly defined by the USACE and EPA as "*those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions* (33 CFR §328.3(b))." Wetlands generally include swamps, marshes, bogs, and similar areas.

It should be noted that a major change in wetland regulation occurred on January 9, 2001, when the U.S. Supreme Court issued the decision, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers et al* (SWANCC). The SWANCC decision limited the scope of the USACE's Section 404 CWA regulatory permitting program as applied to isolated waters. The Supreme Court struck down the USACE's jurisdictional authority over isolated, non-navigable, intrastate waters that are not tributary or adjacent to navigable waters or tributaries (i.e., wetland conditions). Overall, the Court held that Congress did not intend for isolated, non-navigable water conditions to be covered within Section 404 of the CWA, since they are not considered to be true "waters of the U.S."

Rapanos

The June 19, 2006, U.S. Supreme Court decision on the *Rapanos v. United States* case has further limited the definition of "wetlands" and "waters of the United States" under the CWA. The Rapanos decision was a 4-1-4 decision in which four justices advocated a narrower interpretation of the Clean Water Act to hold that "waters of



the United States” excludes intermittent or ephemeral streams and wetlands without a continuous surface connection to navigable waters.

The USACE and EPA came out with a memorandum on June 5, 2007, in order to provide guidance in implementing the U.S. Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (jointly hereafter Rapanos), which addresses the jurisdiction over waters of the United States under the CWA. In accordance with the Rapanos Decision, the agencies will continue to assert jurisdiction over traditional navigable water (TNW) and all wetlands adjacent to TNWs; however, jurisdiction can be asserted over a waters, including wetlands, which are not a TNW by meeting either of the following standards:

- ❑ Relatively permanent (i.e., flows year-round, or at least seasonally) non-navigable tributaries of TNW and wetlands with a continuous surface connection with such tributaries.
- ❑ Certain adjacent and non-navigable tributaries that are not relatively permanent. This requires a case-by-case “significant nexus” analysis to determine whether waters and their adjacent wetlands are jurisdictional. A “significant nexus” may be found where waters, including adjacent wetlands, affect chemical, physical, or biological integrity of TNWs.

Regional Water Quality Control Boards (RWQCB)

The nine RWQCBs are the primary agencies responsible for protecting water quality in California. The RWQCBs regulate discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCBs’ jurisdiction extend to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions).

Section 401 of the CWA gives the RWQCBs the authority to regulate through 401 Certification any proposed federally permitted activity which may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCBs to provide “certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards.” Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, of which are found as numeric and narrative objectives in each of the nine RWQCB Basin Plans.

The Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC era, with respect to the State’s authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge (should there be no Section 404 nexus). Although “waste” is partially defined as any waste substance associated with human habitation, the RWQCBs also interpret this to include fill discharged into water bodies.



California Department of Fish and Game (CDFG)

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to Sections 1600-1607 of the California Fish and Game Code. Legislation that took effect on January 1, 2004 repealed Fish and Game Code sections 1600-1607 and added Fish and Game Code sections 1600-1616. The most important issue to note with this change is that now there is no separation between private/public notifications (previously 1601/1603). Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify the CDFG before beginning any activity that will do one or more of the following:

- ❑ substantially obstruct or divert the natural flow of a river, stream, or lake;
- ❑ substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
- ❑ deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Jurisdictional limits of the CDFG are not as clearly defined by regulation as those of the USACE. Fish and Game Code section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFG takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

SPECIAL STATUS BIOLOGICAL RESOURCES

Federal Endangered Species Act (FESA)

The Federal Endangered Species Act (FESA) of 1973, as amended, requires all federal agencies to consider listed species in their planning efforts and to take positive actions to further the conservation of these species. Section 9 of FESA prohibits any taking of a listed species. The definition of “take” includes to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. A notable component of this definition is the definition of “harm.” “Harm” in the definition of “take” means an act that actually kills or injures protected wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Sections 7 and 10 of FESA describe agency consultation procedures that allow the USFWS and the National Marine Fisheries Service (NMFS) to approve exceptions to the federal prohibition against take of listed species. If there is a federal nexus (i.e., another federal agency



involved with a project), Section 7 of FESA requires federal interagency consultation to minimize impacts to listed species. If no other federal agency is involved, Section 10 of FESA may be used for activities connected to a single project, or for takings as small as a single specimen. Under both Sections 7 and 10, the USFWS and/or the NMFS will evaluate potential effects of the project and require specific protection measures.

FESA Section 9/Section 10(a)(1)(B) – Section 9 prohibitions on the Take of threatened and endangered species can be addressed in a Habitat Conservation Plan (HCP) and an Implementation Agreement may be issued pursuant to Section 10(a)(1)(B) of FESA which requires that any authorized Incidental Take of a listed species “will not appreciably reduce the likelihood of survival and recovery of the species in the wild.”

FESA Section 7 – “Jeopardy” and “Adverse Modification” - Section 7 of FESA requires consultation to assure that federal agency actions “are not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of” critical habitat. The Section 7 “jeopardy” and “adverse modification” requirements extend to all listed species. The courts have held that the “jeopardy” standard for Section 7 is the same as the standard for Incidental Take authorization under Section 10(a)(1)(B).

FESA Section 3 – Critical Habitat Standards - FESA Section 3(5)(A)(i and ii) set forth standards to be employed in designating critical habitat for federally listed species. With regard to occupied habitat, FESA Section 3(5)(a)(i) requires that (1) occupied habitat essential to the conservation of the species must be identified; (2) any special management considerations must be identified; and (3) any special protection must be identified. FESA Section 3(5)(A)(ii) requires that unoccupied habitat essential to the conservation of the species must also be identified.

California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) (Fish and Game Code Sections 2050 to 2097) is administered by the CDFG and prohibits the take of plant and animal species designated by the Fish and Game Commission as either threatened or endangered in the State of California. “Take” in the context of the CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when attempting to take individuals of a listed species.

CESA establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that affect both state and federal listed species, compliance with FESA will satisfy CESA, if the CDFG determines that the federal incidental take authorization is consistent with CESA under Fish and Game Code Section 2080.1. For projects that result in a take of a state-only listed species, the lead agency may apply for a take permit under Section 2081(b).



Species of Special Concern

California Species of Special Concern is an informal designation used by the CDFG for some declining wildlife species that are not listed as threatened or endangered, and are not state candidates for listing at this time. This designation does not provide legal protection but signifies that these species are recognized as special status by the CDFG.

Watch List

Recently CDFG downlisted several species from Species of Special Concern to the Watch List. Although not considered special status, these species are being tracked by the CNDDDB.

Protection of Raptor Nests

The loss of an active nest of any common or special status raptor species would be considered a violation of the California Fish and Game Code, Sections 3503, 3503.5, and 3513. California Fish and Game Code Sections 3503, 3503.5, and 3513 prohibit the unlawful take, possession, or destruction of the nest or eggs of any bird.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. § 703 et. seq.) provides special protections based on various treaties and conventions for migratory birds. The MBTA specifically protects nesting activities of birds. The MBTA and CDFG Code protect the nesting activities of all resident and migratory birds that occur within the United States, with the exception of introduced species (i.e., house sparrow [*Passer domesticus*], European starling [*Sturnus vulgaris*], and rock pigeon [*Columba livia*]).

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN (MSHCP)

The MSHCP is a comprehensive, multi-jurisdictional plan that focuses on conservation of species and their associated habitats in Western Riverside County. This MSHCP allows Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of FESA and CESA. The MSHCP Area encompasses 1.26 million acres.

This MSHCP has 146 “Covered Species” (including 14 Narrow Endemic plant species). Of the 146 “Covered Species”, 118 species (including 13 of the 14 Narrow Endemic plant species) are considered “adequately conserved” within the MSHCP. A Covered Species is considered adequately conserved when enough habitat for that species (i.e., geographic area, soils and/or habitat that supports, or has the potential to support, the Covered Species) has been acquired, or designated for acquisition into the MSHCP “Criteria Area” (i.e., Reserve). For species not deemed adequately conserved, additional dedication and/or purchase of conservation land may be required, as determined on a project-by-project basis. A Narrow Endemic species has a limited geographic distribution (e.g., Santa Rosa Plateau or San Jacinto River



Valley), an affinity for a particular soil-type (e.g., Domino, Travers, or Willow), and/or is restricted to a specific habitat (e.g., coastal sage scrub, vernal pools, etc.).

The Project site is located within the MSHCP Temescal Canyon Area Plan of the MSHCP; however, it is not located in a Cell; therefore, it is not designated to be incorporated into the MSHCP Criteria Area. The target conservation acreage range for the Temescal Canyon Area Plan is 29,555 to 31,870 acres. The conservation area within this Area Plan will be composed of approximately 26,070 acres of existing Public/Quasi-public lands and 3,485 to 5,800 acres of additional reserve lands. Approximately 11.7 acres of Public/Quasi-public lands comprised of the Mabey Canyon Debris Basin and Kroonen Channel are located in the survey area. These areas are under the ownership of the Riverside County Flood Control District and as Public/Quasi-public lands, they will be managed in a manner consistent with the MSHCP. The MSHCP requires that project sites be evaluated for various factors to assess how they meet the criteria identified in the MSHCP. As such, the Project site has been assessed for riparian/riverine resources (and associated species), vernal pools (and associated species), areas under the jurisdiction of the USACE and/or CDFG, urban/wildlands interface issues, and potential for burrowing owl. Compliance with the MSHCP is addressed as part of the impact analysis in Section 5.7.4, IMPACTS, below.

Western Riverside County Regional Conservation Authority (WRC RCA)

The Western Riverside County Regional Conservation Authority (WRC RCA) was created as a joint powers authority to acquire, administer, operate, and maintain land and facilities to establish habitat reserves for the conservation and protection of species covered by the MSHCP and to implement the MSHCP. The City of Corona is a member agency of the WRC RCA and a permittee under the plan, and therefore, must comply with the requirements of the MSHCP Implementation Agreement. The USFWS and CDFG are the resource agencies responsible for reviewing projects for consistency with the MSHCP if a DBESP is required.

CITY OF CORONA GENERAL PLAN

The *City of Corona General Plan* Environmental Resources Element provides goals, policies, and implementation measures to protect and reduce impacts to biological resources within the City and sphere of influence (SOI). Applicable goals and policies relative to the Project site within the Environmental Resources Element are included in Table 5.7-1, below.

Table 5.7-1
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Biological Resources

GOALS AND POLICIES	PROJECT CONSISTENCY
Environmental Resources Element Goals	
<u>Biological Resources Goal 10.7</u> : <i>Ensure that biological resources are not impacted during or as a result of construction and development activity.</i>	The recommended mitigation measures, identified in this section, would reduce impacts to biological resources to less than significant. Therefore, the Project would be consistent with Goal 10.7.



Table 5.7-1 (Continued)
Consistency Analysis with the City of Corona General Plan
Goals and Policies for Biological Resources

GOALS AND POLICIES	PROJECT CONSISTENCY
<p><u>Biological Resources Goal 10.9:</u> <i>Protect natural and biological resources within riparian corridors and wetlands.</i></p>	<p>Recommended Mitigation Measure 5.7-2a would reduce impacts to riparian corridors to less than significant. The <i>Delineation Report</i> prepared for the proposed Project concluded no federally protected wetlands are known to occur on-site. Therefore, implementation of the proposed Project would not result in any impacts on federally protected wetlands. Therefore, the Project would be consistent with Goal 10.9.</p>
<p><u>Biological Resources Goal 10.11:</u> <i>Protect the Temescal Wash and work towards its ultimate use for recreational and open space purposes such as trails, habitat preservation, and groundwater recharge.</i></p>	<p>Temescal Wash is not located within the Project site. Therefore, Goal 10.11 is not applicable to the proposed Project.</p>
<p>Environmental Resources Element Policies</p>	
<p><u>Biological Resources Policy 10.7.1:</u> <i>Require that construction activities be conducted in a manner to minimize adverse impacts on natural resources through the use of Best Management Practices, as established and updated by the City of Corona.</i></p>	<p>Implementation Mitigation Measure 6 in the City's <i>General Plan</i>, which corresponds to Policy 10.7.1, applies to building construction and does not provide BMPs which apply to this Project. Therefore, Policy 10.7.1 is not applicable to the Project. However, Mitigation Measure 5.7-1b would require the Project to implement construction minimization measures pursuant to Section 7.5.3 of the MSHCP.</p>
<p><u>Biological Resources Policy 10.7.2:</u> <i>Where applications for development are being proposed in undeveloped areas of the City and the SOI areas, or in areas that an Initial Study has determined there is potential for significant adverse impacts to biological resources, and Environmental Impact Report (EIR) or a Mitigated Negative Declaration shall be undertaken by the proponent. As part of these studies, the proponent shall also submit a Biological Resources Technical Report with the following qualifications:</i></p> <ul style="list-style-type: none"> ▪ <i>The report must be prepared by a qualified professional who addresses the proposed project's impact on federally and State-listed and candidate plants and animals; CDFG Special Animals; natural communities of high inventory priority with the CNDDDB; and any other special interest species or communities identified in the General Plan Technical Background Report or those thereafter named by federal or State trustee agencies.</i> ▪ <i>If appropriate habitat for any listed species occurs on the site, a qualified biologist shall conduct focused surveys according to USFWS and/or CDFG protocol.</i> ▪ <i>A qualified botanist shall conduct a focused rare plant survey during the appropriate time of year following CDFG guidelines.</i> ▪ <i>If any listed species would potentially be impacted by the proposed project, consultation with USFWS and/or CDFG would be required to identify mitigation measures to avoid, minimize, or compensate for impacts. These mitigation measures would be included in the report.</i> ▪ <i>The report shall also define a program for monitoring and evaluating the effectiveness of the specified mitigation measures.</i> 	<p>This EIR has been prepared for the proposed Project in order to evaluate potentially significant impacts. The <i>Biological Technical Report</i> prepared for the proposed Project summarizes focused surveys conducted to evaluate the potential presence or absence of various species listed as threatened or endangered, or special status species that require additional surveys under the MSHCP. Therefore, the proposed Project is consistent with Policy 10.7.2.</p> <p>Although Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>) was identified in the City's <i>General Plan Technical Background Report</i>, the MSHCP did not require surveys for this species on the Project site, this species is not expected to occur on the Project site, as it was not observed during focused surveys. Therefore, this species is not discussed in the Biological Technical Report.</p>



Table 5.7-1 (Continued)
Consistency Analysis with the City of Corona General Plan
Goals and Policies for Biological Resources

GOALS AND POLICIES	PROJECT CONSISTENCY
<p><u>Biological Resources Policy 10.9.1:</u> Review proposed developments in riparian and wetland habitats to evaluate their conformance with the following policies and standards:</p> <ul style="list-style-type: none"> ▪ Full consideration of the nature of existing biological resources present and all reasonable measures that shall be taken to avoid significant impacts, including retention of sufficient natural open space and undeveloped buffer zones. ▪ Development shall be designed and sited to preserve watercourses, riparian habitat, vernal pools, and wetlands in their natural condition, unless these actions result in an infeasible project. ▪ Where riparian corridors are retained, they shall be protected by an adequate buffer with a minimum 100 foot protection zone from the edge of the tree, shrub, or herb canopy. ▪ Development shall incorporate habitat linkages (wildlife corridors) to adjacent open spaces, where appropriate. ▪ Development shall incorporate fences, walls, vegetative cover, or other measures to adequately buffer habitat areas, linkages, or corridors from the built environment. ▪ Roads and utilities shall be located and designed such that conflicts with biological resources, habitat areas, linkages, or corridors are avoided. ▪ Development shall utilize appropriate open space or conservation easements in order to protect sensitive species or their habitats. ▪ Development shall mitigate unavoidable adverse impacts to waters of the United States, wetlands, and riparian habitat by replacement on an in-kind basis (i.e., riparian habitat is to be replaced by riparian habitat of the same type). Replacement shall be based on a ratio determined by the California State Fish and Game Department and/or the Army Corps of Engineers in order to account for the potentially diminished habitat value of replacement habitat. Such replacement shall occur on the original development site, whenever possible. Alternatively, replacement can be effected, subject to State and Federal regulatory approval, by creation or restoration of replacement habitats elsewhere, preferably within Corona's Planning Area. Replacement habitats are to be protected in perpetuity through acquisition, an appropriate conservation easement, or dedication. 	<p>Implementation of recommended Mitigation Measure 5.7-2a, 5.7-2b, and 5.7-6a would reduce impacts on riparian/riverine habitat, native trees, least Bell's vireo (if present), and jurisdictional impacts to less than significant. The <i>Delineation Report</i> prepared for the proposed Project concluded no federally protected wetlands are known to occur on-site. Therefore, implementation of the proposed Project would not result in any impacts on federally protected wetlands. Recommended Mitigation Measure 5.7-4 would minimize impacts on wildlife movement in Wardlow Wash. The mitigation measures, identified in this section, would reduce impacts to biological resources to less than significant and would be consistent with the requirements of Policy 10.9.1. Therefore, the Project would be consistent with Policy 10.9.1.</p>



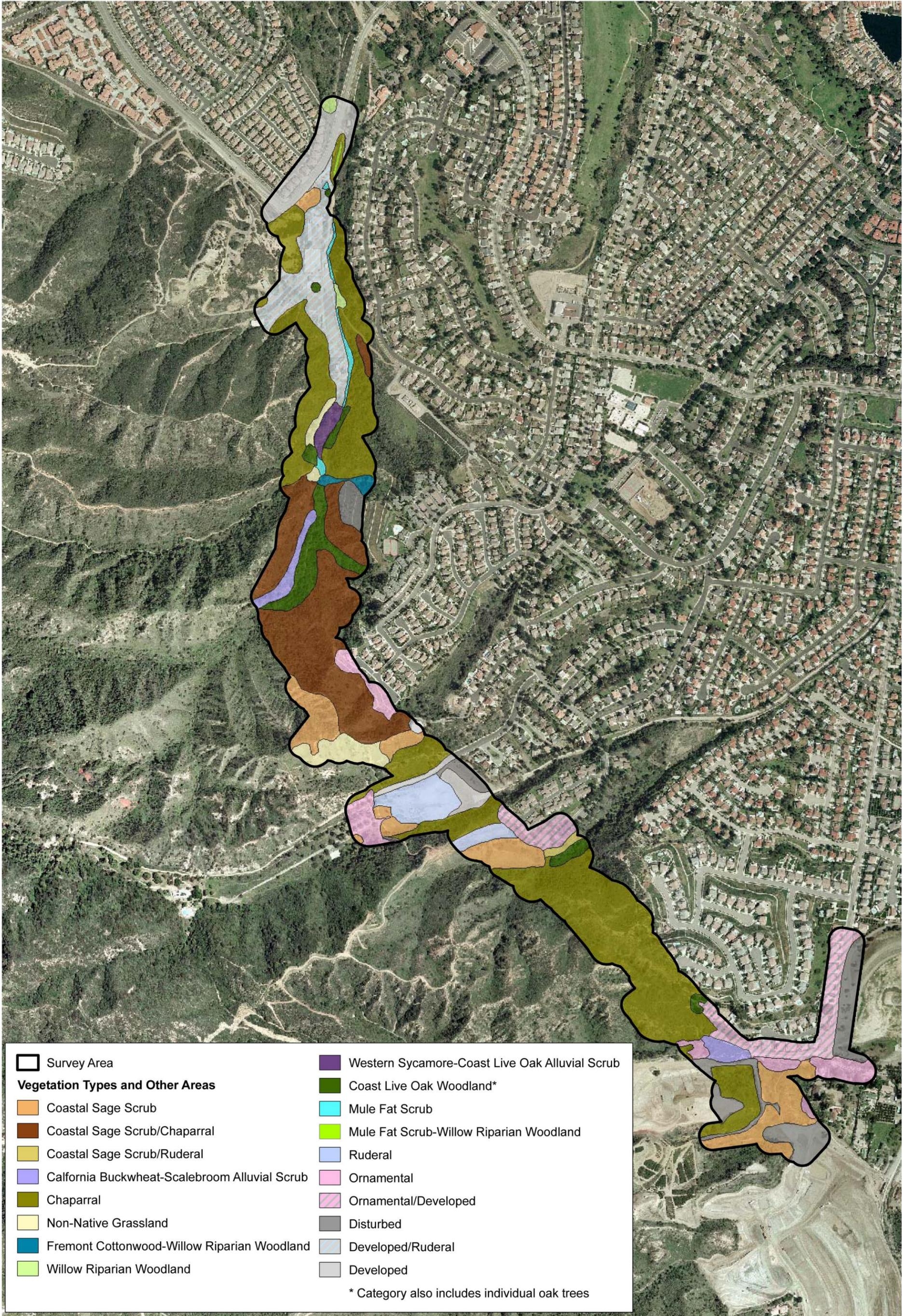
Table 5.7-1 (Continued)
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Biological Resources

GOALS AND POLICIES	PROJECT CONSISTENCY
<p><u>Biological Resources Policy 10.9.2:</u> <i>Prohibit development and grading that alters the biological integrity of riparian corridors, unless no feasible alternative exists or the damaged habitat is replaced with habitat of equivalent value. Development that is permitted with riparian corridors shall be based on field evidence and interpretation of physical and biological data that shall include the following:</i></p> <ul style="list-style-type: none"> ▪ <i>The nature and extent of the vegetation, or in the case of disturbed sites, the potential vegetation</i> ▪ <i>Topography</i> ▪ <i>Hydrology</i> 	<p>Development of the proposed alignment would impact riparian habitat; however, with implementation of Mitigation Measure 5.7-2a, impacts would be reduced to less than significant. The Project shall replace riparian habitat at a minimum ratio of 2:1. As such, the Project would be consistent Policy 10.9.2.</p>
<p><u>Biological Resources Policy 10.11.1:</u> <i>Protect sensitive biological resources in the MSHCP Temescal Canyon Area Plan through adherence to policies found in the Western Riverside County MSHCP.</i></p>	<p>The Project site is located within the MSHCP Temescal Canyon Area Plan of the MSHCP; however, it is not located in the MSHCP Criteria Area nor in a cell. The <i>Biological Technical Report</i> prepared for the proposed Project concludes the Project would be consistent with polices in the MSHCP with implementation of mitigation measures identified in this section. As such, the Project would be consistent with Policy 10.11.1</p>
<p><u>Biological Resources Policy 10.11.3:</u> <i>Conserve existing known populations of least Bell's vireo and southwestern willow flycatcher within the Temescal Canyon Area Plan including locations at Prado Basin, Santa Ana River, and Temescal Wash. Maintain existing breeding habitat for these species at Prado Basin, Santa Ana River, and Temescal Wash.</i></p>	<p>Refer to the response to Policy 10.11.1, above. As such, the Project would be consistent with Policy 10.11.3</p>

5.7.3 EXISTING CONDITIONS

PLANT AND VEGETATION TYPES

Eighteen vegetation types and other areas occur on the Project site (refer to Figure 5.7-2, BIOLOGICAL RESOURCES, and Table 5.7-2, VEGETATION TYPES ON THE PROJECT SITE).



Source: Foothill Parkway Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.



CITY OF CORONA
Foothill Parkway Westerly Extension

Back of 11 x 17 page



**Table 5.7-2
Vegetation Types on the Project Site**

Vegetation Type	Existing (Acres)
Coastal Sage Scrub	14.00
Coastal Sage Scrub/Chaparral	22.54
Coastal Sage Scrub/Ruderal	0.47
California Buckwheat-Scalebroom Alluvial Scrub	2.67
Chaparral	47.92
Non-native Grassland	3.65
Fremont Cottonwood-Willow Riparian Woodland	0.75
Willow Riparian Woodland	0.52
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97
Coast Live Oak Woodland	5.93
Mule Fat Scrub	0.87
Mule Fat Scrub-Willow Riparian Woodland	0.13
Ruderal	5.11
Ornamental	6.90
Ornamental/Developed	8.80
Disturbed	10.39
Developed/Ruderal	9.50
Developed	7.48
Total	148.60
Source: Foothill Parkway Westerly Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.	

Coastal Sage Scrub

Coastal sage scrub on the Project site consists of California sagebrush-California buckwheat sage scrub. This vegetation type occurs throughout the Project site in pockets in the chaparral and in isolated patches. This vegetation contains a mix of shrubs and herbaceous species. The dominant native perennial species on the Project site include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), orange-bush monkey flower (*Mimulus aurantiacus*), giant wild rye (*Leymus condensatus*), and deerweed (*Lotus scoparius*).

Coastal Sage Scrub/Chaparral

Coastal sage scrub/chaparral vegetation occurs in the northern half of the Project site. The coastal sage scrub/chaparral is a mixture of chaparral with pockets of sage scrub species that are too small to delineate on the vegetation map. This vegetation type includes chamise (*Adenostoma fasciculatum*), hoaryleaf ceanothus (*Ceanothus crassifolius*), laurel sumac (*Malosma laurina*), scrub oak, California sagebrush, and California buckwheat.



Coastal Sage Scrub/Ruderal

Coastal sage scrub/ruderal vegetation occurs in the central portion of the Project site. This area is directly adjacent to a road and residences and contains a mixture of sage scrub species, ornamental species and ruderal species. This area is dominated by California sagebrush, rock rose (*Cistus purpureus*), tocalote (*Centaurea melitensis*), and ripgut brome (*Bromus diandrus*).

California Buckwheat-Scalebroom Alluvial Scrub

Alluvial areas occur in the middle of the northern portion of the Project site and in the southern portion of the Project site. Disturbed alluvial scrub occurs adjacent to the debris basin at the end of Mabey Canyon on the Project site. This area has been previously disturbed by fire suppression and debris basin maintenance. Alluvial areas are dominated by scale-broom (*Lepidospartum squamatum*) and California buckwheat.

Chaparral

Chaparral vegetation occurs throughout the Project site, covering much of the southern half of the Project site. This vegetation type is a mix of chaparral species including chamise, hoaryleaf ceanothus, laurel sumac, scrub oak, hairy lilac (*Ceanothus oliganthus*), toyon (*Heteromeles arbutifolia*), sugar bush (*Rhus ovata*), and Our Lord's candle (*Yucca whipplei*).

Non-Native Grassland

Non-native grasslands occur in the central and northern portions of the Project site. These areas are dominated by black mustard (*Brassica nigra*), Russian thistle (*Salsola tragus*), and red brome (*Bromus madritensis*).

Fremont Cottonwood-Willow Riparian Woodland

Fremont cottonwood-willow riparian woodland occurs in the northern portion of the Project site in Wardlow Wash. This vegetation type is dominated by Fremont cottonwood, black willow, narrow-leaved willow (*Salix exigua*), lance-leaved willow (*Salix lucida*), mule fat (*Baccharis salifolia*), and western false indigo (*Amorpha fruticosa*). The active stream channel in this vegetation type is rocky with little vegetation.

Willow Riparian Woodland

Willow riparian woodland occurs in the northern portion of the Project site; one patch is north of Paseo Grande and one patch is located along the narrow portion of the wash adjacent to the horse stables. This vegetation type is dominated by a mix of black willow and lance-leaved willow with mule fat occurring in the understory.



Western Sycamore-Coast Live Oak Alluvial Scrub

Western sycamore-coast live oak alluvial scrub occurs in Wardlow Wash in the northern portion of the Project site. This vegetation type is adjacent to the intermittent stream that has a rocky bottom. The dominant species are coast live oak and western sycamore. The understory is moderate in quality and contains western false indigo, mule fat, California brickellbush (*Brickellia californica*), thicketleaf yerba santa (*Eriodictyon crassifolium*), scale-broom, and tarragon (*Artemisia dracuncululus*).

Coast Live Oak Woodland

Coast live oak woodland vegetation occurs in two small patches in the northern and central portions of the Project site. These areas are dominated by coast live oak. Other species present in this area include toyon, laurel sumac, and poison oak (*Toxicodendron diversilobium*). In addition to the woodlands, this vegetation category also includes a few individual coast live oak trees that occur within the horse stables.

Mule Fat Scrub

Mule fat scrub occurs in the drainage adjacent to the horse stables in the northern portion of the Project site. This vegetation type is dominated by mule fat with scattered upland species including scale-broom, California sagebrush, and California buckwheat. The banks adjacent to this vegetation type were burned during the fire in Fall 1999.

Mule Fat Scrub-Willow Riparian Woodland

Mule fat scrub-willow riparian woodland occurs in the northern portion of the Project site along the drainage adjacent to the horse stables, just south of Paseo Grande. This vegetation type is dominated by mule fat scrub with scattered mature willows.

Ruderal

Ruderal vegetation occurs in patches along the alignment with the largest ruderal area being the existing Mabey Canyon Debris Basin. Species present in ruderal areas include non-native species and weedy native species. On the Project site, these species include tree tobacco (*Nicotiana glauca*), Bermuda grass (*Cynodon dactylon*), telegraph weed (*Heterotheca grandifolia*), black mustard, Russian thistle, red brome, and castor bean (*Ricinus communis*).

Ornamental

Ornamental vegetation occurs in the southern half of the Project site. These areas include residential areas, green belts, and nurseries. The species present include ornamental pines (*Pinus* sp.), crawling acacia (*Acacia redolens*), California fan palm (*Washingtonia filifera*), and hottentot fig (*Carpobrotus edulis*).



Ornamental/Developed

Ornamental/Developed areas occur in the southern half of the Project site and consist of developed areas with ornamental vegetation interspersed. These areas are primarily residential development.

Disturbed

The area mapped as disturbed occurs at the southern end of the Project site. This area was being graded at the time of the 2006 vegetation mapping. No vegetation was present in these areas during the vegetation mapping.

Developed/Ruderal

Developed/ruderal areas occur in the northern portion of the Project site and consist of the horse stable and associated facilities. These areas have permanent buildings, portable trailers, horse corrals and dirt roads. There is scattered non-native weedy vegetation throughout this area. Common species include tree tobacco, telegraph weed, and non-native grasses (*Bromus* spp.).

Developed

Developed areas occur in the central and southern portions of the Project site. These areas consist of the concrete areas in the Mabey Canyon Debris Basin, a concrete-lined channel, existing paved roads, and residential and water district structures.

WILDLIFE

Fish

Most creeks and waterways in southern California are subject to periods of high water flow in winter and spring and little to no flow during late summer and fall. The streams on the Project site are ephemeral and flow primarily after periods of rain. No running water and no substantial ponding was observed on the Project site. Therefore, no fish species are expected to occur on the Project site.

Amphibians

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction, but usually require high soil moisture conditions for normal activity and egg laying. Amphibians in dry areas are able to survive by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as amount of vegetation cover, elevation, and slope aspect.



No amphibians were detected during the field surveys. The ephemeral streams on the Project site have the potential to support the western toad (*Bufo boreas*) and Pacific treefrog (*Pseudacris [Hyla] regilla*).

Reptiles

The reptile diversity and abundance of an area typically varies depending on vegetation type and character. Many species prefer only one or two vegetation types; however, most will forage in a variety of habitats. Reptiles occurring in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

Reptile species observed or expected to occur within the Project area include the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), western skink (*Eumeces skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), California whipsnake (*Masticophis lateralis*), gopher snake (*Pituophis catenifer*), common kingsnake (*Lapropeltis getula*), and western rattlesnake (*Crotalus oreganos*).

Birds

Resident birds are species present in the region during all four seasons. A variety of bird species are expected to be residents on the Project site, using the habitats throughout the year. Other species are present only during certain seasons. The white-crowned sparrow (*Zonotrichia leucophrys*) is expected to occur on the Project site during the winter season and migrates north in the spring to breed during the summer months.

The coastal sage scrub and chaparral vegetation types on the Project site support bird species adapted to dense low vegetation. Resident bird species that are common inhabitants of coastal sage scrub and chaparral habitats observed on the Project site includes California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), and California towhee (*Pipilo crissalis*).

Wintering birds are those species that generally breed outside the region but migrate to the area for the winter season. During the winter months, coastal sage scrub and chaparral vegetation provides habitat for a variety of species that migrate from breeding grounds further north. Winter resident bird species that inhabit coastal sage scrub and chaparral habitats observed on the Project site include hermit thrush (*Catharus guttatus*) and white-crowned sparrow.

Riparian habitats are extremely important to birds, providing food, cover, and breeding habitat for a wide variety of species throughout the year. Bird species observed that are resident of this habitat on the Project site include mourning dove (*Zenaida macroura*), black-chinned hummingbird (*Archilochus alexandri*), Anna's hummingbird (*Calypte anna*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltriparus minimus*), and song sparrow (*Melospiza melodia*). During spring and fall migration, riparian areas provide important foraging habitat for a large number



and variety of passerines (song birds). Migrating passerines (i.e. perching birds) species that were observed on the Project site include Pacific-slope flycatcher (*Empidonax difficilis*), black-throated gray warbler (*Dendroica nigrescens*), Townsend's warbler (*Dendroica townsendi*), and Wilson's warbler (*Wilsonia pusilla*). The turkey vulture (*Cathartes aura*), a scavenger, was observed on the Project site. Birds of prey (raptors) were also observed on the Project site and include Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). These raptors may also nest on the Project site.

Mammals

Small, ground-dwelling mammals observed on the Project site include California ground squirrel (*Spermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*). Other small mammals expected to occur on the Project site include deer mouse (*Peromyscus maniculatus*), California pocket mouse (*Perognathus californicus*), woodrat (*Neotoma* sp.), and pocket gopher (*Thomomys bottae*).

Bats occur throughout most of southern California and may use any portion of the Project site as foraging habitat. The riparian forest and oak woodland vegetation types on the Project site provide potential roosting opportunities. Most of the bats that could potentially occur on the Project site are inactive during the winter and either hibernate or migrate, depending on the species. Bats were incidentally observed foraging over the Mabey Canyon Debris Basin during the burrowing owl evening surveys. Several bat species expected to occur on the Project site include big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), and hoary bat (*Lasiurus cinereus*).

Large mammals observed on the Project site included mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), and bobcat (*Felis rufus*). Other large mammals expected to occur on Project site include the, gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), common raccoon (*Procyon lotor*), and mountain lion (*Puma [Felis] concolor*).

WILDLIFE MOVEMENT

Wildlife corridors serve important purposes for wildlife by linking together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The lack of wildlife corridors creates fragmentation of open space areas and "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in



search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- ❑ Travel route. A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while moving between habitat areas and provides a relatively direct link between target habitat areas.
- ❑ Wildlife corridor. A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors, often referred to as "habitat or landscape linkages," can provide both transitory and resident habitat for a variety of species.
- ❑ Wildlife crossing. A small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor, which may impede wildlife movement and increase the risk of predation.

It is important to note that in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once



open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles such as roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can “become” corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The Project site is bordered to the south and west by the Cleveland National Forest. The areas to the north and east of the proposed road extension are developed. The Project site itself is primarily undeveloped, and thus, all drainages (i.e., Wardlow, Mabey, and Tin Mine canyons) and ridgelines would be expected to function as local travel routes for wildlife.

Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and Prado Basin; however, the Western Riverside MSHCP has not identified Wardlow Wash for long-term preservation as a “linkage.” On the Project site (i.e., upstream of Paseo Grande), Wardlow Wash has a wide, uninterrupted connection with the Cleveland National Forest. Downstream of the Project site, the drainage continues north and west along Palisades Drive until it comes to the railroad tracks adjacent to State Route 91 (SR-91) and State Highway 71 (Corona Expressway). SR-91 is a significant barrier to wildlife movement, but there are two locations where functional wildlife crossings may exist. The first is the railway crossing that passes under SR-91 where the drainage bends to the west, while the second is near the Corona Expressway. The railway crossing under SR-91 is fairly wide and open, with open space surrounding both sides of the crossing with limited obstruction (i.e., barbed wire fence) on the north side of the freeway and no obstructions on the south. As a result, this railroad undercrossing may serve as a wildlife crossing, especially for some of the larger mammal species. Barriers to wildlife movement along Wardlow Wash are present north (i.e., downstream) of the Project site. Three streets, Paseo Grande, Serfas Club Drive, and Palisades Drive, cross the wash. All three are fairly small streets and may allow some movement of wildlife over them, although Palisades Drive is substantially elevated. The drainage crosses under each of these three roads and is open to free movement of wildlife. The crossing under Paseo Grande and Serfas Club Drive are six-foot diameter culverts that are probably not large enough for the larger mammal species such as mountain lion and deer, though these species may cross over the roads. The adjacent developments may also decrease use of this wash by some wildlife species. Open space along Wardlow Wash is very narrow in stretches, and indirect effects of urban habitats (e.g., night lighting, noise, and general human activity) may reduce the quality of the habitat for wildlife movement.

Although Wardlow Wash functions as a regional wildlife corridor, the Western Riverside MSHCP has not identified Wardlow Wash for long-term preservation as a “linkage.” Fresno Canyon, approximately 1.5 miles west of the Project site, is the closest linkage (Proposed Constrained Linkage 2) identified for preservation in the Western Riverside MSHCP. Fresno Canyon provides a riparian connection between the Prado Basin/Santa Ana River (Existing Core A) and the Cleveland National Forest (Existing Core B).



SPECIAL STATUS BIOLOGICAL RESOURCES

Plant and wildlife species afforded special status and/or recognition by Federal and State resource agencies and private conservation organizations are indicated below. A taxon (i.e., species, subspecies, or variety) is given special status because of a documented or perceived decline in population size or geographic range, vulnerability to habitat change, or restricted distributions resulting in, in most cases, habitat loss. Table 5.7-3, SPECIAL STATUS PLANTS KNOWN TO OCCUR IN VICINITY OF THE PROJECT SITE, and Table 5.7-4, SPECIAL STATUS WILDLIFE KNOWN TO OCCUR IN VICINITY OF THE PROJECT SITE, provide a summary of special status plant and wildlife species occurring in the Project vicinity, including information on the status, potential for occurrence, and definitions for the various status designations. Figure 5.7-3, SPECIAL STATUS PLANT SPECIES LOCATIONS, indicates the location of special status plant species within the Project area. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined Federal, State, local governments, and conservation organizations (e.g., CNPS). Figure 5.7-4, SPECIAL STATUS WILDLIFE SPECIES LOCATIONS, indicates the location of special status wildlife species within the Project area.

The CNPS is a local resource conservation organization that has developed an inventory of California's special status plant species (CNPS 2007). This inventory is the summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory is comprised of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as rare, threatened, or endangered throughout their range. List 2 plant species are considered rare, threatened, or endangered in California but more common in other states. Plant species for which CNPS needs additional information are included on List 3. List 4 is a "watch list" of plant species that have a limited distribution in California whose susceptibility to threat appears low at this time. CNPS also assigns a "threat code" extension to the List categories of threat the species (CNPS 2007). An extension of ".1" is assigned to plants that are considered to be "seriously endangered" in California with over 80 percent of the occurrences threatened or with a high degree and immediacy of threat. "Fairly endangered" in California (between 20 and 80 percent of the occurrences threatened) are listed with an extension of ".2". Extension ".3" is assigned to plants that are considered "not very endangered" in California with less than 20 percent of occurrences threatened. The absence of a threat code extension indicates plants lacking any threat information. The CNPS List categories and threat code extensions are summarized in Table 5.7-3.



**Table 5.7-3
Special Status Plants Known to Occur in Vicinity of the Project Site**

Species	Status			Potential to Occur on Project Site*
	USFWS	CDFG	CNPS	
<i>Abronia villosa</i> var. <i>Aurita</i> chaparral sand-verbena	–	–	1B.1	No suitable habitat; not observed during focused surveys.
<i>Allium munzii</i> Munz's onion	FE	ST	1B.1	No suitable habitat; not observed during focused surveys.
<i>Astragalus brauntonii</i> Braunton's milk-vetch	FE	–	1B.1	No suitable habitat; not observed during focused surveys.
<i>Atriplex coulteri</i> Coulter's saltbush	–	–	1B.2	No suitable habitat; not observed during focused surveys.
<i>Baccharis malibuensis</i> Malibu baccharis	–	–	1B.1	Suitable habitat; not observed during focused surveys.
<i>Calochortus plummerae</i> Plummer's mariposa lily	–	–	1B.2	Suitable habitat; not observed during focused surveys.
<i>Calochortus weedii</i> var. <i>intermedius</i> intermediate mariposa lily	–	–	1B.2	Suitable habitat; observed during focused surveys.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> long-spined spineflower	–	–	1B.2	Suitable habitat; not observed during focused surveys.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> white-bracted spineflower	–	–	1B.2	No suitable habitat; not observed during focused surveys.
<i>Cupressus forbesii</i> Tecate cypress	–	–	1B.1	No suitable habitat; not observed during focused surveys.
<i>Dudleya multicaulis</i> many-stemmed dudleya	–	–	1B.2	No suitable habitat; not observed during focused surveys.
<i>Eriastrum densifolium</i> ssp. <i>Sanctorum</i> Santa Ana River woollystar	FE	SE	1B.1	No suitable habitat; not observed during focused surveys.
<i>Lepechinia cardiophylla</i> heart-leaved pitcher sage	–	–	1B.2	No suitable habitat; not observed during focused surveys.
<i>Nolina ismontane</i> chaparral nolina	–	–	1B.2	Suitable habitat; not observed during focused surveys.
<i>Phacelia suaveolens</i> ssp. <i>keckii</i> Santiago Peak phacelia	–	–	1B.3	No suitable habitat; not observed during focused surveys.
<i>Romneya coulteri</i> Coulter's matilija poppy	–	–	4.2	Suitable habitat; observed during focused surveys.
<i>Senecio aphanactis</i> rayless ragwort	–	–	2.2	Suitable habitat; not observed during focused surveys.
<i>Sidalcea neomexicana</i> Salt Spring checkerbloom	–	–	2.2	No suitable habitat; not observed during focused surveys.
<p>Federal (USFWS) FE Endangered FT Threatened PE Proposed Endangered PT Proposed Threatened</p> <p>State (CDFG) SE Endangered ST Threatened SR Rare PE/T Proposed Endangered/Threatened</p> <p>California Native Plant Society (CNPS) List Categories List 1A Plants Presumed Extinct in California List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere List 3 Plants About Which We Need More Information – A Review List List 4 Plants of Limited Distribution – A Watch List</p> <p>California Native Plant Society (CNPS) Threat Code Extensions None Plants lacking any threat information .1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat) .2 Fairly Endangered in California (20–80% of occurrences threatened) .3 Not very Endangered in California (less than 20% of occurrences threatened or no current threats known)</p> <p>* The surveys were only conducted during the blooming periods of the species with potential to occur on the Project site that are not covered by the MSHCP.</p>				
Source: Source: Foothill Parkway Westerly Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.				



**Table 5.7-4
Special Status Wildlife Known to Occur in Vicinity of the Project Site**

Species	Status		Potential to Occur on Project Site
	USFWS	CDFG	
Invertebrates			
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	FE	–	Not expected to occur; no suitable habitat.
Amphibians			
<i>Taricha torosa torosa</i> Coast Range newt	–	SSC	Limited potential to occur; suitable terrestrial habitat; no suitable breeding habitat.
<i>Spea [Scaphiopus] hammondii</i> western spadefoot	–	SSC	Limited potential to occur; suitable terrestrial habitat; limited suitable breeding habitat.
<i>Bufo californicus</i> arroyo toad	FE	SSC	Not expected to occur; not observed during 2000 focused surveys; no suitable breeding habitat.
Reptiles			
<i>Emys [Clemmys] marmorata pallida</i> southwestern pond turtle	–	SSC	Not expected to occur; no suitable habitat.
<i>Coleonyx variegatus abbotti</i> San Diego banded gecko	–	SA	May occur; limited suitable habitat.
<i>Phrynosoma coronatum [blainvillii]</i> population coast [San Diego] horned lizard	–	SSC	Expected to occur; suitable habitat.
<i>Aspidoscelis [Cnemidophorus] hyperythra [beldingi]</i> [Belding's] orange-throated whiptail	–	SSC	Expected to occur; suitable habitat.
<i>Aspidoscelis [Cnemidophorus] tigris stejnegeri [multiscutatus]</i> coastal western whiptail	–	SA	Observed on the Project site; suitable habitat.
<i>Anniella pulchra pulchra</i> silvery legless lizard	–	SSC	Expected to occur; suitable habitat.
<i>Charina [Lichanura] trivirgata</i> rosy boa	–	SA	Expected to occur; suitable habitat.
<i>Diadophis punctatus [modestus]</i> [San Bernardino] ringneck snake	–	SA	May occur; suitable habitat.
<i>Lampropeltis zonata</i> California mountain kingsnake	–	SSC	May occur; suitable habitat.
<i>Salvadora hexalepis virgultea</i> coast patch-nosed snake	–	SSC	May occur; suitable habitat.
<i>Thamnophis hammondii</i> two-striped garter snake	–	SSC	Limited potential to occur; limited suitable habitat.
<i>Crotalus ruber ruber</i> northern red diamond rattlesnake	–	SSC	Expected to occur; suitable habitat.
Birds			
<i>Accipiter cooperii</i> Cooper's hawk	–	WL	Observed foraging; suitable foraging habitat; expected to occur for nesting; suitable nesting habitat.
<i>Accipiter striatus</i> sharp-shinned hawk	–	WL	May occur for foraging; suitable foraging habitat; not expected to occur for nesting; outside known breeding range.
<i>Aquila chrysaetos</i> golden eagle	–	WL, FP	May occur for foraging; suitable foraging habitat; limited potential to occur for nesting; potentially suitable nesting habitat.
<i>Buteo regalis</i> ferruginous hawk	–	WL	May occur for foraging; suitable foraging habitat; not expected to occur for nesting; outside breeding range.



Table 5.7-4 (Continued)
Special Status Wildlife Known to Occur in Vicinity of the Project Site

Species	Status		Potential to Occur on Project Site
	USFWS	CDFG	
<i>Buteo swainsoni</i> Swainson's hawk	-	ST	May occur for foraging as a rare migrant; suitable foraging habitat; not expected to occur for nesting; outside breeding range.
<i>Circus cyaneus</i> northern harrier	-	SSC	Observed foraging; suitable foraging habitat; not expected to occur for nesting; no suitable nesting habitat.
<i>Elanus leucurus</i> white-tailed kite	-	FP	May occur for foraging; suitable foraging habitat; may occur for nesting; suitable nesting habitat.
<i>Falco columbarius</i> merlin	-	WL	May occur for foraging; potentially suitable foraging habitat; not expected to occur for nesting; outside breeding range.
<i>Falco mexicanus</i> prairie falcon	-	WL	May occur for foraging; suitable foraging habitat; not expected to occur for nesting; no suitable nesting habitat.
<i>Falco peregrinus anatum</i> American peregrine falcon	- *	SE, FP	Limited potential for foraging; potentially suitable foraging habitat; not expected to occur for nesting; no suitable nesting habitat.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FC	SE	Not expected to occur; no suitable habitat.
<i>Asio otus</i> long-eared owl	-	SSC	May occur for foraging; potentially suitable foraging habitat; may occur for nesting; suitable nesting habitat.
<i>Athene cunicularia</i> burrowing owl	-	SSC	Not expected to occur; not observed during 2006 or 2008 focused surveys of the Project site; limited suitable habitat.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	FE	SE	Not expected to occur; no suitable habitat.
<i>Lanius ludovicianus</i> loggerhead shrike	-	SSC	May occur; potentially suitable habitat.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE	SE	May occur; not observed during 2000 or 2006 focused surveys of the Project site; one migrant observed on one visit during the 2008 surveys; suitable habitat.
<i>Eremophila alpestris actia</i> California horned lark	-	WL	May occur; limited suitable habitat.
<i>Campylorhynchus brunneicapillus</i> cactus wren	-	SSC	Limited potential to occur; limited suitable habitat.
<i>Polioptila californica californica</i> coastal California gnatcatcher	FT	SSC	May occur; suitable habitat.
<i>Dendroica petechia brewsteri</i> yellow warbler	-	SSC	Observed on the Project site; suitable habitat.
<i>Icteria virens</i> yellow-breasted chat	-	SSC	May occur; suitable habitat.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	-	WL	Observed on the Project site; suitable habitat.
<i>Amphispiza belli belli</i> Bell's sage sparrow	-	WL	Expected to occur; suitable habitat.
<i>Agelaius tricolor</i> tricolored blackbird	-	SSC	Not expected to occur; no suitable habitat.



Table 5.7-4 (Continued)
Special Status Wildlife Known to Occur in Vicinity of the Project Site

Species	Status		Potential to Occur on Project Site																												
	USFWS	CDFG																													
Mammals																															
<i>Antrozus pallidus</i> pallid bat	–	SSC	May occur for foraging; suitable foraging habitat; may occur for roosting; potentially suitable roosting habitat.																												
<i>Corynorhinus townsendii pallescens</i> pale big-eared bat	–	SSC	May occur for foraging; suitable foraging habitat; limited potential for roosting; limited roosting habitat.																												
<i>Euderma maculatum</i> spotted bat	–	SSC	May occur for foraging; suitable foraging habitat; limited potential for roosting; limited roosting habitat.																												
<i>Lasiurus xanthinus</i> western yellow bat	–	SA	May occur for foraging; potentially suitable foraging habitat; may occur for roosting; potentially suitable roosting habitat.																												
<i>Myotis ciliolabrum</i> small-footed myotis	–	SA	May occur for foraging; potentially suitable foraging habitat; may occur for roosting; potentially suitable roosting habitat.																												
<i>Myotis yumanensis</i> Yuma myotis	–	SA	May occur for foraging; potentially suitable habitat; limited potential for roosting; limited roosting habitat.																												
<i>Eumops perotis</i> western mastiff bat	–	SSC	May occur for foraging; suitable foraging habitat; limited potential for roosting; limited roosting habitat.																												
<i>Nyctinomops ferrosaccus</i> pocketed free-tailed bat	–	SSC	May occur for foraging; suitable foraging habitat; limited potential for roosting; limited roosting habitat.																												
<i>Nyctinomops macrotis</i> big free-tailed bat	–	SSC	May occur for foraging; potentially suitable foraging habitat; limited potential for roosting; limited roosting habitat.																												
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	–	SSC	May occur; potentially suitable habitat.																												
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	–	SSC	May occur; suitable habitat.																												
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	FE	ST	Not expected to occur; no suitable habitat.																												
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	–	SSC	Not expected to occur; no suitable habitat.																												
<i>Onychomys torridus ramona</i> southern grasshopper mouse	–	SSC	May occur; potentially suitable habitat.																												
<table border="0"> <tr> <td colspan="2">Federal (USFWS)</td> <td colspan="2">State (CDFG)</td> </tr> <tr> <td>FE</td> <td>Endangered</td> <td>SE</td> <td>Endangered</td> </tr> <tr> <td>FT</td> <td>Threatened</td> <td>ST</td> <td>Threatened</td> </tr> <tr> <td>FC</td> <td>Candidate</td> <td>SCC</td> <td>Species of Special Concern</td> </tr> <tr> <td></td> <td></td> <td>SA</td> <td>Special Animal</td> </tr> <tr> <td></td> <td></td> <td>WL</td> <td>Watch List Species</td> </tr> <tr> <td></td> <td></td> <td>FP</td> <td>Fully Protected</td> </tr> </table>				Federal (USFWS)		State (CDFG)		FE	Endangered	SE	Endangered	FT	Threatened	ST	Threatened	FC	Candidate	SCC	Species of Special Concern			SA	Special Animal			WL	Watch List Species			FP	Fully Protected
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* The American peregrine falcon was delisted by the USFWS in 1999.																															
Source: Foothill Parkway Westerly Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.																															



VEGETATION TYPES

Vegetation types or communities that support concentrations of special status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife are considered to be special status with the resource agencies. Although these vegetation types are not afforded legal protection unless they support protected species, potential impacts on them may increase concerns and mitigation suggestions by the resource agencies.

Coastal Sage Scrub

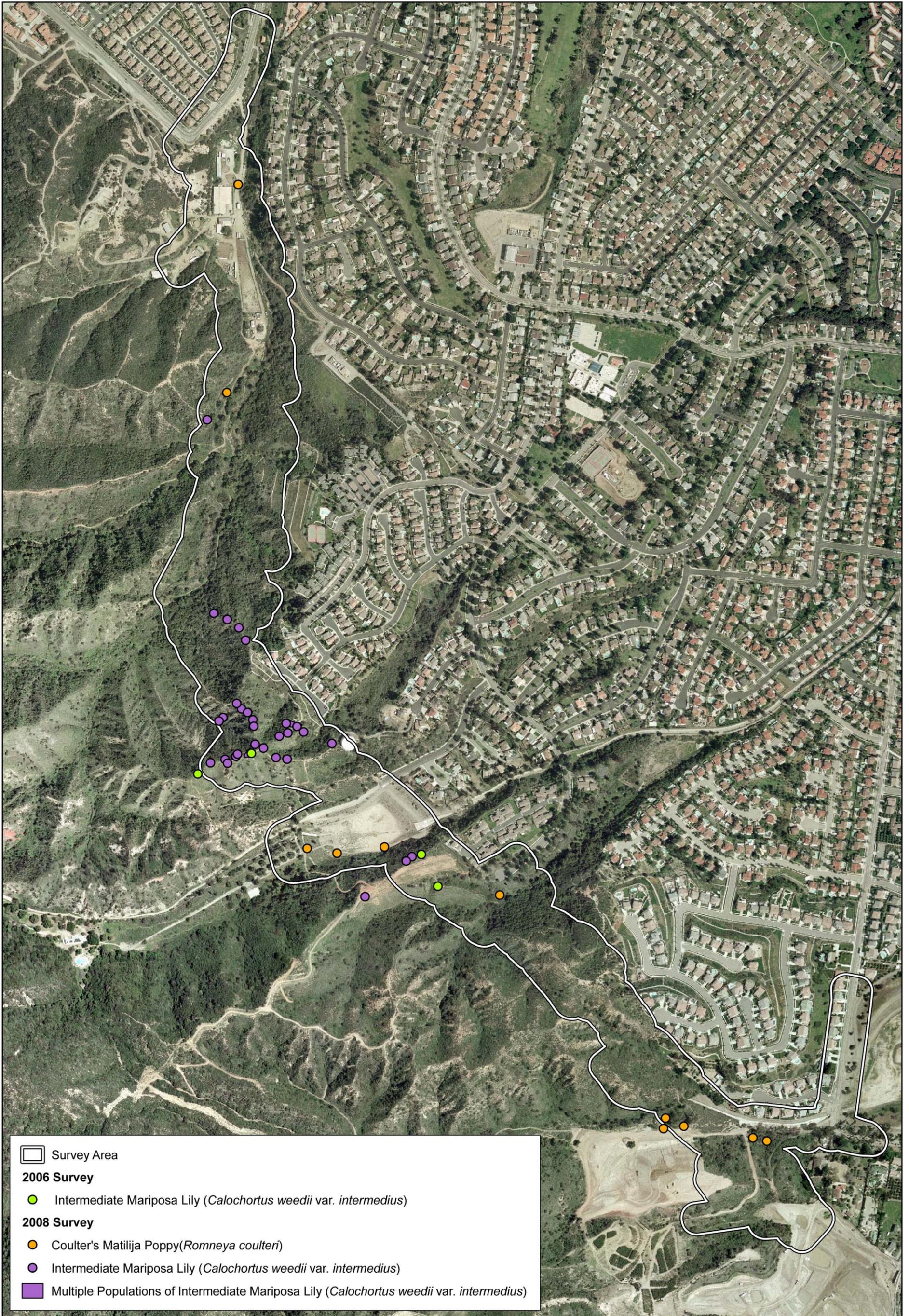
Coastal sage scrub vegetation types on the Project site include coastal sage scrub, coastal sage scrub/chaparral, and coastal sage scrub/ruderal. These vegetation types are declining throughout southern California and support many special status plant and wildlife species. This vegetation type is covered by the MSHCP.

Riparian

Riparian vegetation on the Project site includes California buckwheat-scalebroom alluvial scrub, Fremont cottonwood-willow riparian woodland, willow riparian woodland, western sycamore-coast live oak alluvial scrub, coast live oak woodland, mule fat scrub, and mule fat scrub-willow riparian woodland. In general, riparian vegetation can provide important biological functions for an ecosystem such as cover and water sources for wildlife, filtration of runoff water and groundwater recharge, and flood control and sediment stabilization. As a result, the resource agencies often consider these vegetation types to be important resources.

Riparian vegetation on the Project site, or portions of this vegetation type, would require a Section 404 Permit pursuant to the Clean Water Act by the USACE, a Section 401 Water Quality Certification and a Report of waste Discharge from the RWQCB, and a Section 1602 Streambed Alteration Agreement from the CDFG. As indicated in the *Delineation Report*, a total of 4.63 acres of waters of the U.S. are under the jurisdiction of USACE, 4.66 acres of jurisdiction under the RWQCB, and 9.77 acres of streambed are under the jurisdiction of CDFG. A native tree survey determined that 64 western sycamores, 4 Fremont cottonwoods, and 6 black willows are present within riparian areas within the survey area. The survey also included oak trees, as described below.

Riparian vegetation types provide habitat for species associated with Riparian/Riverine areas as described in Section 6.1.2 of the MSHCP. If the riparian vegetation types on the Project site support riparian species listed in Section 6.1.2 (e.g.; least Bell's vireo, southwestern willow flycatcher), or if the riparian area provides functions and values to downstream habitat areas potentially occupied by these species, avoidance of these vegetation types is required. If avoidance is not practicable, a Determination of Biologically Equivalent or Superior Preservation (DBESP) is required in accordance with Section 6.1.2 of the MSHCP.



Source: Foothill Parkway Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.



CITY OF CORONA
Foothill Parkway Westerly Extension

Back of 11 x 17 page



Source: Foothill Parkway Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.



CITY OF CORONA
Foothill Parkway Westerly Extension

Back of 11 x 17 page



Coast Live Oak Woodland

Coast live oak woodlands are declining throughout California due to residential, commercial and industrial development. Oak woodlands are an important resource in California providing aesthetic, cultural, economic, and environmental value, in addition to wildlife habitat. A native tree survey determined that 181 coast live oak and 17 scrub oaks are present within the survey area. Individual trees require mitigation and incorporation into the riparian revegetation mitigation.

5.7.4 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

The determination of impacts in this analysis is based on a comparison of maps depicting the proposed alignment grading limits and maps of biological resources on the Project site. All construction activities, including staging and equipment areas, are assumed to be contained within the limits of grading. Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that affect habitats due to grading, construction, and construction-related activities. Indirect impacts are those that would be related to impacts on the adjacent remaining habitat due to construction activities (e.g., noise, dust) and operation of the Project site (e.g. human activity, indirect lighting).

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist form, which includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been used as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if one or more of the following occurs:

- ❑ Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to *Impact Statements 5.7-1* through *5.7-8*);
- ❑ Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to *Impact Statements 5.7-2a*, *5.7-2b*, and *5.7-9*);
- ❑ Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, costal, etc.) through direct removal, filling, hydrological interruption, or other means (refer to *Impact Statement 5.7-9*);
- ❑ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (refer to *Impact Statement 5.7-4*);



- ❑ Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (refer to *Impact Statement 5.7-2*); and/or
- ❑ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to *Impact Statements 5.7-1 through 5.7-8*).

Section 15065(a), *Mandatory Findings of Significance*, of the CEQA Guidelines states that a project may have a significant effect on the environment if "...the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species"

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

The actual and potential occurrence of these resources on the Project site was correlated with the previously identified significance criteria (from CEQA guidelines) to determine whether the impacts of the proposed alignment on these resources would be significant.

Potential impacts associated with the proposed alignment have been identified. The impacts are categorized according to topic, and numbered consecutively under each category. The numbered mitigation measures in Section 5.7.6, MITIGATION MEASURES, directly correspond with the numbered impact statements.

5.7.5 IMPACTS

SHORT-TERM (CONSTRUCTION) IMPACTS

- 5.7-1 *Construction of the proposed alignment could result in temporary impacts to biological resources in the Project area. **Significance: Impacts would be reduced to less than significant levels with implementation of Mitigation Measures 5.7-1a through 5.7-1c.***

Impact Discussion: Development in proximity to the MSHCP Conservation Area may result in edge effects that could adversely affect biological resources in the MSHCP Conservation Area. To minimize these edge effects, the MSHCP provides guidelines for drainage, toxics, lighting, noise, invasives, and barriers. The proposed alignment is adjacent to the Cleveland National Forest, which is within the MSHCP Criteria



Area (i.e., reserve). The following evaluates short-term (construction) implications of the proposed alignment on biological resources adjacent to the Project site.

Construction of the proposed alignment may result in several indirect impacts on biological resources. These impacts could include increased runoff that may affect water quality, increased lighting that would affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife, increased dust accumulation on surrounding vegetation, impacts on nesting birds/raptors, increased fire danger, and the spread of exotic species. These impacts would be considered adverse and potentially significant because the proposed alignment is located adjacent to the Cleveland National Forest. Implementation of Mitigation Measure 5.5-1a (i.e. standard dust suppression) in Section 5.5, AIR QUALITY would serve to reduce construction-related dust generation. Therefore, the indirect effect of impairing respiration of existing plant species on the Project site is considered less than significant. Implementation of recommended Mitigation Measures 5.7-1a through 5.7-1c would reduce short-term construction related impacts to biological resources to less than significant.

Grading/Land Development

The proposed alignment has been designed to avoid grading into the Cleveland National Forest. Therefore, there would be no impact in this regard as a result of grading/land development activities, and no mitigation would be required.

Urban and Stormwater Runoff (Drainage)

Impacts on biological resources in the vicinity of the Project site could occur as a result of changes in water quality. During construction, runoff carrying excessive silt or petroleum residues from construction equipment could potentially impact water quality and, in turn, affect plant and wildlife species using the habitats adjacent to the Project site. Implementation of water quality Mitigation Measures 5.9-1a through 5.9-1c in Section 5.9, HYDROLOGY AND WATER QUALITY, would ensure impacts to water resources would be less than significant. Short-term drainage impacts that would result during the construction of the proposed alignment would be reduced to less than significant with incorporation of these recommended mitigation measures.

Noise

The *Biological Technical Report* indicates that noise levels on the Project site would increase substantially over present levels during construction of the proposed alignment. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. Wildlife species stressed by noise may disperse from the habitat in the vicinity of the proposed alignment. This impact would be considered adverse and potentially significant because the Project site is located adjacent to the Cleveland National Forest. Recommended Mitigation Measure 5.7-1c would require the incorporation of noise reducing mechanisms (i.e. setbacks, berms or sound walls) and that noise levels within the MSHCP Conservation Area not exceed residential noise standards (refer to Section 5.6, NOISE, for a discussion of the City of Corona's noise standards). In addition, Mitigation Measures 5.6-1a through 5.6-1e, and 5.6-1g in Section 5.6, NOISE, also provide construction noise mitigation measures.



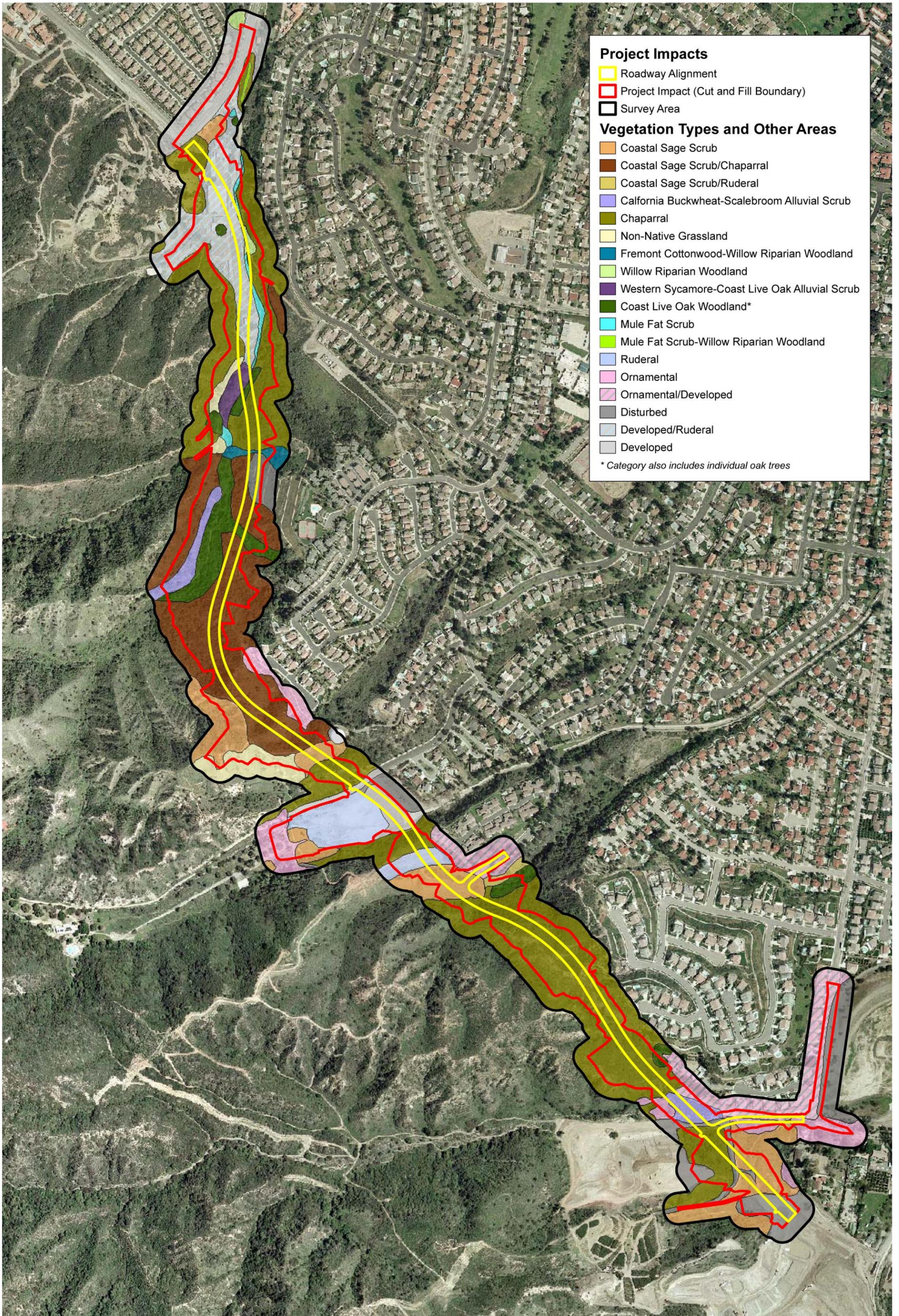
VEGETATION

5.7-2 Construction of the proposed alignment would impact a total of 79.40-acres of native and non-native vegetation types and other areas, impacting plant and wildlife species known to occur in the Project area. **Significance: The City of Corona's compliance with relevant measures from the Western Riverside MSHCP and Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to less than significant levels.**

Impact Discussion: Approximately 79.40 acres of native and non-native vegetation types and other areas would be impacted by the proposed alignment. These impacts are discussed and summarized in Table 5.7-5, PROJECT VEGETATION IMPACTS, and illustrated in to Figure 5.7-5, PROJECT VEGETATION IMPACTS.

**Table 5.7-5
Project Vegetation Impacts**

Vegetation Type	Impacts (Acres)
Coastal Sage Scrub	7.25
Coastal Sage Scrub/Chaparral	14.02
Coastal Sage Scrub/Ruderal	0.15
California Buckwheat-Scalebroom Alluvial Scrub	2.42
Chaparral	22.84
Non-native Grassland	1.76
Fremont Cottonwood-Willow Riparian Woodland	0.40
Willow Riparian Woodland	0.25
Western Sycamore-Coast Live Oak Alluvial Scrub	0.97
Coast Live Oak Woodland	5.06
Mule Fat Scrub	0.78
Mule Fat Scrub-Willow Riparian Woodland	0.00
Ruderal	4.81
Ornamental	2.20
Ornamental/Developed	1.97
Disturbed	3.96
Developed/Ruderal	7.31
Developed	3.25
Total	79.40
Source: Foothill Parkway Westerly Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.	



Source: Foothill Parkway Extension Project Site Biological Technical Report, BonTerra Consulting, July 17, 2008.



Back of 11 x 17 page



Vegetation Types

Coastal Sage Scrub, Coastal Sage Scrub/Chaparral, Coastal Sage Scrub/Ruderal. The proposed Project would impact 7.25 acres of coastal sage scrub, 14.02 acres of coastal sage scrub/chaparral, and 0.15 acre of coastal sage scrub/ruderal vegetation. Coastal sage scrub vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, no mitigation would be required.

Chaparral. The proposed Project would impact 22.84 acres of chaparral vegetation. Chaparral vegetation is considered to be relatively common in the region. Chaparral vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on this vegetation type are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, no mitigation would be required.

Non-native Grassland. The proposed Project would impact 1.76 acres of non-native grassland. Impacts on non-native grassland vegetation are considered adverse but less than significant because these areas are considered to have a lower biological value than native vegetation types and are relatively common in the region. Grassland vegetation is proposed for conservation within the MSHCP Criteria Area; however, the Project site is not located within the Criteria Area. Impacts on this vegetation type are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, no mitigation would be required.

Riparian. The proposed Project would impact 9.88 acres of riparian vegetation types (2.42 acres of California buckwheat-scalebroom alluvial scrub, 0.40 acre of Fremont cottonwood-willow riparian woodland, 0.25 acre of willow riparian woodland, 0.97 acre of western sycamore-coast live oak alluvial scrub, 5.06 acre of coast live oak woodland, and 0.78 acre of mule fat scrub). Riparian vegetation is generally considered high quality because it provides habitat for many native plant and wildlife species. In addition, it provides functions and values that contribute to habitat quality downstream that is occupied by special status species. Impacts on riparian vegetation would be considered significant. A DBESP Report was prepared to discuss these impacts in regards to Section 6.1.2 of the MSHCP (refer to Appendix 15.8).

The proposed Project would impact 55 western sycamores, 3 Fremont cottonwoods, and 6 black willows within riparian areas that would be impacted by the proposed Project. Impacts on oaks are discussed below. Impacts on native trees within the riparian forest vegetation type would be considered significant. Implementation of Mitigation Measures 5.7-2a and 5.7-2b would reduce the impact on native trees to less than significant.

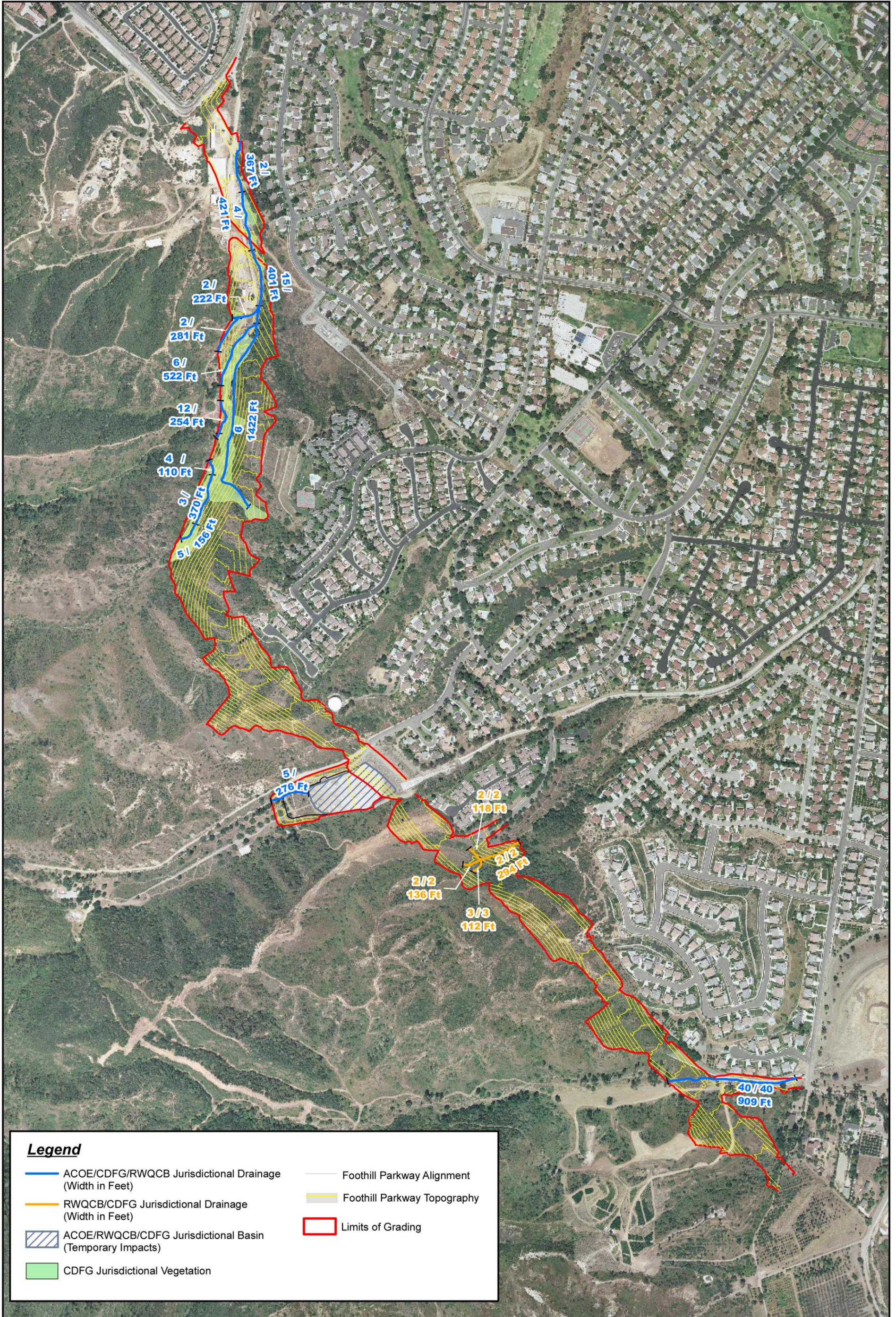
The determination of the biologically equivalent or superior preservation conclusion for riparian/riverine habitat is derived from the DBESP Report. Although the removal of Riparian/Riverine habitat is considered a significant loss of riparian forest habitat, recommended Mitigation Measures 5.7-2a and 5.7-2b would be considered biologically equivalent or superior. Impacts on native trees within the riparian forest



vegetation type would be considered significant. Implementation of Mitigation Measures 5.7-2a and 5.7-2b would reduce the impact on native trees to less than significant. Mitigation Measure 5.7-2a requires restoration of riparian habitat at no less than a 2:1 ratio to ensure no net loss of riparian habitat. Additionally, Mitigation Measure 5.7-2a requires a detail restoration program be prepared for the Project, prior to issuance of a grading permit. Mitigation Measures 5.7-2a and 5.7-2b require replacement of native trees within the riparian habitat at the following ratios: coast live oaks 4:1; sycamore 3:1; cottonwood 3:1; willow 2:1; and scrub oak 2:1. Mitigation Measure 5.7-2b includes requirements for removal of native trees, as recommended in the Native Tree Survey.

Riparian areas and their associated streambeds are also under the jurisdiction of the USACE and CDFG. A total of 4.63 acres of waters of the U.S. are under the jurisdiction of USACE, 4.66 acres of jurisdiction under the RWQCB, and 9.77 acres of streambed are under the jurisdiction of CDFG would be impacted by the proposed alignment (refer to Figure 5.7-6, JURISDICTIONAL MAP). Based on a replacement ratio of 2:1 and 9.77 acres of riparian habitat under the jurisdiction of CDFG that would be impacted by the Project, the restoration of 19.54 acres of riparian habitat would ensure that there is no net loss of riparian habitat in the Project region. The restoration of this habitat is expected to be biologically equivalent to allowing the habitat to remain in place, and may be considered superior if the habitat is preserved or restored along a larger watercourse that is connected to other regionally significant habitat areas occupied by the least Bell's vireo. Although the functions and values of existing drainages would be altered with implementation of the proposed alignment, this mitigation would provide similar functions and values in an area that would be protected by a conservation easement or other similar agreement as outlined in a conceptual mitigation plan. Therefore, the restoration of 19.54 acres of riparian habitat is considered a biologically equivalent or superior preservation alternative. Implementation of recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts to riparian vegetation to less than significant.

Coast Live Oak Woodland. The proposed Project would impact coast live oak woodland vegetation. Most of these woodlands are located along drainages on the Project site, and therefore, oak impacts have been included in the discussion of riparian vegetation types above. The proposed Project would impact 113 coast live oaks and 17 scrub oaks that occur within the riparian and oak woodland vegetation types. Impacts on oak trees would be considered significant. Implementation of Mitigation Measure 5.7-2b would reduce the impact on oak trees to less than significant.



Legend

- ACOE/CDFG/RWQCB Jurisdictional Drainage (Width in Feet)
- RWQCB/CDFG Jurisdictional Drainage (Width in Feet)
- ACOE/RWQCB/CDFG Jurisdictional Basin (Temporary Impacts)
- CDFG Jurisdictional Vegetation
- Foothill Parkway Alignment
- Foothill Parkway Topography
- Limits of Grading



CITY OF CORONA
Foothill Parkway Westerly Extension

Back of 11 x 17 page



Ruderal, Ornamental, Ornamental/Developed, Disturbed, Developed/Ruderal, Developed. The proposed Project would impact 2.20 acres of ornamental vegetation and 1.97 acres of ornamental/developed areas. The proposed Project would also impact 4.81 acres of ruderal vegetation, 3.96 acres of disturbed, 7.31 acres of developed/ruderal, and 3.25 acres of developed areas. These areas generally have low biological value because they are composed of unvegetated areas or are vegetated with non-native species. These areas generally provide limited habitat for native plant and wildlife species, although they may occasionally be used by native species. Therefore, impacts on these areas would not be considered significant and no mitigation would be required.

Potential Additional Impacts. Mabey Canyon Road may need to be widened to connect with the proposed Foothill Parkway. The widening of Mabey Canyon Road may result in an additional impact of 0.96 acre of native vegetation and 0.80 acre of non-native vegetation and other areas as shown in Table 5.7-6 below. Impacts resulting from the widening of Mabey Canyon Road would be consistent with those described above.

**Table 5.7-6
Potential Additional Impacts Resulting From
Widening of Mabey Canyon Road**

Vegetation Type	Impacts (Acres)
Coastal Sage Scrub	0.13
California Buckwheat-Scalebroom Alluvial Scrub	0.06
Chaparral	0.77
Ornamental	0.15
Ornamental/Developed	0.37
Developed	0.28
Total	1.76
Source: <i>Foothill Parkway Westerly Extension Project Site Biological Technical Report</i> , BonTerra Consulting, July 17, 2008.	

GENERAL HABITAT LOSS AND WILDLIFE LOSS

5.7-3 *Construction of the proposed alignment would result in the loss of approximately 54.14 acres of native habitat and 22.01 acres of non-native habitat. **Significance: The City of Corona's compliance with the MSHCP would reduce impacts to less than significant levels.***

Figure 5.7-5 illustrates the vegetation types (i.e., wildlife habitat) that would be impacted as a result of the development of the proposed alignment. Construction of the proposed alignment would result in the loss of approximately 54.14 acres of native habitat that provide valuable nesting, foraging, roosting, and denning opportunities for a wide variety of wildlife species. In addition, implementation of the proposed alignment would result in the loss of 22.01 acres of non-native habitats that provide lower quality wildlife habitat. However, these non-native habitats provide nesting, foraging, roosting, and denning opportunities for some species. The



widening of Mabey Canyon Road may result in a loss of an additional 0.96 acre of native habitat and 0.52 acre of non-native habitat.

Removing or altering habitats on the Project site would result in the loss of small mammals, reptiles, amphibians, and other slow-moving animals that live in the Project's direct impact area. More mobile wildlife species that are now using the Project site would be forced to move into the remaining areas of open space, which would consequently increase competition for available resources in those areas. This situation would result in the loss of individuals that cannot successfully compete.

The loss of native and non-native habitats that provide wildlife habitat is considered an adverse impact. However, the Project site has not been identified as an area to be conserved by the MSHCP (i.e., it is not located within the Criteria Area). Therefore, impacts on these vegetation types are considered adverse but mitigated by the City of Corona's participation in the MSHCP. Therefore, no mitigation would be required beyond the provisions contained in the MSHCP.

WILDLIFE MOVEMENT AND HABITAT FRAGMENTATION

5.7-4 *Development of the proposed alignment would substantially impact regional wildlife movement along Wardlow Wash. **Significance: The City of Corona's compliance with relevant measures from the MSHCP would reduce impacts to less than significant levels.***

The Project site is bordered to the south and west by the Cleveland National Forest. The areas to the north and east of the proposed roadway extension are developed. The proposed Project would extend a roadway along the edge of existing and proposed development. The proposed Project would remove local travel routes within the direct impact area; however, few native habitat areas would be located northeast of the proposed alignment. Therefore, the proposed Project would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the alignment. Therefore, impacts on local wildlife movement would be considered less than significant and no mitigation would be required.

The proposed Project would adversely affect regional wildlife movement along a segment of Wardlow Wash within the Project impact area. The City of Corona is a participant in the Western Riverside MSHCP, which was prepared to balance the goals of wildlife conservation and economic development. The MSHCP could not preserve all important biological resources; some are preserved while others are allowed to be developed. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, no mitigation would be required. However, it is recommended that the base of the manufactured slope of the road be vegetated with native species to retain potential for some wildlife movement in Wardlow Wash (refer to Mitigation Measure 5.7-4). In addition, it is recommended



that the culvert conveying water from Wardlow Wash under Paseo Grande remain large enough to allow for continued movement of wildlife species. The existing 8-foot culvert is sufficient for movement of medium-sized wildlife. Recreational trails, access roads, and wildlife movement have been considered in the design of two multi-purpose trails as part of the proposed alignment. Figure 5.7-7, TRAILS AND WILDLIFE LINKAGES, indicates the location of existing and future trails and wildlife linkages.

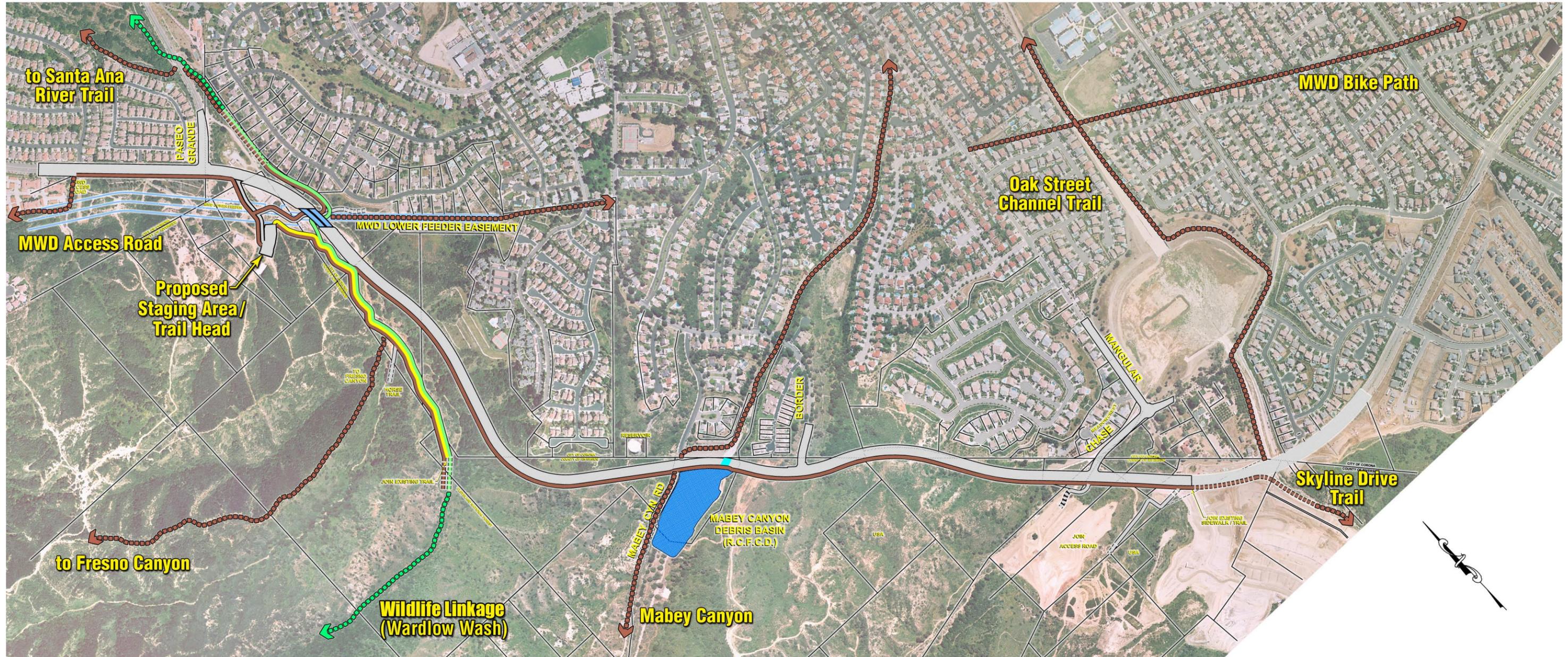
SPECIAL STATUS PLANTS

5.7-5 *Special status plant species occur within the area (i.e., intermediate mariposa lily and Coulter's matilija poppy) and could be impacted by development of the proposed alignment. **Significance: The City of Corona's compliance with relevant measures from the Western Riverside MSHCP and recommended Mitigation Measure 5.7-5 would reduce impacts to less than significant levels.***

Eighteen special status plant species are known to occur in the vicinity of the Project site (refer to Table 5.7-2). Sixteen of the species were not observed on the Project site and would not be impacted by the proposed alignment. Therefore, no mitigation would be required for the 16 special status plant species not observed on the Project site. Two special status plants observed on the Project site are the intermediate mariposa lily and Coulter's matilija poppy, discussed below. Refer to Figure 5.7-3 for an illustration of the locations of intermediate mariposa lilies and Coulter's matilija poppies observed on the Project site.

Intermediate Mariposa Lily. The intermediate mariposa lily was observed during the 2000, 2006, and 2008 focused surveys. A total of 303 individuals were observed in 30 locations on the Project site during the pre-construction surveys conducted in May 2008. This species is CNPS Listed 1B.2 ("fairly endangered" in California). As such, impacts on this species would be considered significant under CEQA. This species is not covered by the MSHCP until its species specific objectives are met. These objectives include preservation of a certain number of localities of this species, which includes the populations known from the Sierra Peak area (Dudek 2000). Implementation of Mitigation Measure 5.7-5 would reduce impacts on intermediate mariposa lily to less than significant.

Coulter's Matilija Poppy. This species observed in scattered locations along Wardlow Wash during the 2006 and 2008 focused surveys. A total of 66 individuals were observed in 11 locations during the pre-construction surveys conducted in May 2008. Although it is considered a special status species (i.e., CNPS List 4.2 ["watch list"]), impacts on this species often do not typically meet the significance criteria under CEQA. However, this species is not covered by the MSHCP until its species specific objectives are met, therefore the City of Corona considers impacts on this species significant (Coletta per. comm. 2006). Impacts on Coulter's matilija poppy would be reduced to less than significant with the implementation of Mitigation Measure 5.7-5.



LEGEND

- | | | | |
|--|--|--|---|
|  SPILLWAY STRUCTURE |  ROADWAY |  PROPOSED TRAIL |  PROPOSED WILDLIFE LINKAGE |
|  BASIN |  PROPOSED ACCESS ROAD |  EXISTING / POTENTIAL TRAIL |  EXISTING WILDLIFE LINKAGE |
|  MWD CROSSING | | | |



Back of 11 x 17 page



SPECIAL STATUS WILDLIFE

5.7-6 *Special status wildlife species may occur within the area and could be impacted by development of the proposed alignment. **Significance: The City of Corona's compliance with the MSHCP would reduce impacts to less than significant levels.***

Impact Discussion: Fifty-four special status wildlife species are known to occur in the vicinity of the Project site. The MSHCP coverage status of these species and the species' potential for occurrence on the Project site are discussed by taxon below.

Invertebrates

The Quino checkerspot butterfly is not expected to occur on the Project site due to lack of suitable habitat. Therefore, the Project alignment is not expected to impact this species and no mitigation would be required.

Amphibians

Arroyo toad is not expected to occur on the Project site due to lack of suitable habitat. In addition, the Project site is outside the additional survey area for this species per the MSHCP. Therefore, there would be no impact on this species and no mitigation would be required.

Coast Range newt and western spadefoot have a limited potential to occur on the Project site. Both of these species are considered "Covered Species Adequately Conserved" by the MSHCP. Impacts on these species are considered adverse, but are mitigated by the City of Corona's participation in the MSHCP. As such, a less than significant impact would occur in this regard and no mitigation would be required for these species.

Reptiles

The southwestern pond turtle is not expected to occur on the Project site due to lack of suitable habitat. Therefore, no impact on this species is anticipated and no mitigation would be required.

San Diego banded gecko, coast horned lizard, orange-throated whiptail, coastal western whiptail, California mountain kingsnake, and northern red diamond rattlesnake were either observed or have potential to occur on the Project site. These six species are all considered Covered Species Adequately Conserved by the MSHCP. Impacts on these species are considered adverse, but are mitigated by the City of Corona's participation in the MSHCP. As such, less than significant impacts would occur and no mitigation would be required for these species.

Silvery legless lizard, rosy boa, ringneck snake, coast patch-nosed snake, and two-striped garter may occur on the Project site and are not covered by the MSHCP. Although populations of these species are declining in the region, impacts on these species would not be expected to appreciably affect the overall population of these species. Therefore, impacts on these species would be considered adverse, but less than significant and no mitigation would be required.



Birds

Suitable habitat is present on the Project site for the least Bell's vireo, a species listed in Section 6.1.2 of the MSHCP as a species that requires additional surveys if suitable habitat is present. This species was not observed during the 2000 or 2006 focused surveys. The least Bell's vireo was observed on only one visit and was therefore considered a migrant using the Project site for dispersal. The Project site was not occupied for breeding in 2008, though the Project site does contain potentially suitable breeding habitat that could be occupied in the future. Any impact on this species would be considered significant. Implementation of Mitigation Measure 5.7-6a would reduce this impact to less than significant.

Although suitable habitat is present on the Project site, burrowing owl was determined to be absent from the Project site at this time because it was not detected during the 2006 or 2008 focused surveys. However, suitable habitat is present on the Project site, and the Project site is located within the additional survey area for this species; therefore, burrowing owl may move into the Project site prior to the start of construction. Any impact on an active burrowing owl burrow would be considered a potentially significant impact. Per MSHCP requirements, a pre-construction survey for burrowing owl would be required to confirm absence of this species from the Project impact area prior to the start of construction. Implementation of recommended Mitigation Measure 5.7-6b would reduce this impact to less than significant.

Loggerhead shrike, California horned lark, cactus wren, coastal California gnatcatcher, yellow warbler, yellow-breasted chat, southern California rufous-crowned sparrow, and Bell's sage sparrow were either observed or have potential to occur on the Project site. These eight species are all considered Covered Species Adequately Conserved by the MSHCP. Impacts on these species are considered adverse, but are mitigated by the City of Corona's participation in the MSHCP. As such, a less than significant impact would occur and no mitigation would be required for these species.

The proposed alignment would result in the loss of suitable foraging habitat for a variety of raptor species including the Cooper's hawk, sharp-shinned hawk, golden eagle, ferruginous hawk, Swainson's hawk, northern harrier, white-tailed kite, merlin, prairie falcon, American peregrine falcon, and long-eared owl. The loss of approximately 76 acres of foraging habitat for these raptor species would cumulatively contribute to the ongoing regional and local loss of foraging habitat. With the exception of the long-eared owl, these raptor species are all considered Covered Species Adequately Conserved by the MSHCP. Impacts on foraging habitat for Covered Species are considered adverse. However, impacts are mitigated by the City of Corona's participation in the MSHCP. As such, a less than significant impact would occur on raptor foraging and no mitigation would be required. Impacts on foraging habitat for the long-eared owl would be considered adverse, but these impacts would not be expected to appreciably affect the overall population of these species given the amount of potentially suitable foraging habitat in the immediate vicinity. Therefore, impacts on long-eared owl would be considered less than significant and no mitigation would be required.



Cooper's hawk, golden eagle, white-tailed kite, and long-eared owl also have potential to nest on the Project site. The loss of an active nest of these species, or any common raptor species, would be considered a violation of the *California Fish and Game Code*, Sections 3503, 3503.5, and 3513. Therefore, the loss of any active raptor nest would be considered significant. Impacts on active raptor nests would be reduced to less than significant with the implementation of recommended Mitigation Measure 5.7-6c.

Mammals

Stephens' kangaroo rat and San Diego desert woodrat are not expected to occur on the Project site due to lack of suitable habitat. Therefore, no impact on these species is anticipated and no mitigation would be required.

San Diego black-tailed jackrabbit and northwestern San Diego pocket mouse have potential to occur on the Project site. These species are both considered Covered Species Adequately Conserved by the MSHCP. Impacts on these species are considered adverse, but mitigated by the City of Corona's participation in the MSHCP. Therefore, a less than significant impact would occur and no mitigation would be required.

Several bat species have potential to forage and roost on the Project site. These include pallid bat, pale big-eared bat, spotted bat, western yellow bat, small-footed myotis, Yuma myotis, western mastiff bat, pocketed free-tailed bat, and big free-tailed bat. None of these species are covered by the MSHCP. The loss of foraging habitat for these bats would cumulatively contribute to the ongoing regional loss of foraging habitat for these species. This is considered an adverse, but a less than significant impact because a relatively substantial amount of foraging habitat for these species is available in the Project vicinity.

Southern grasshopper mouse has potential to occur on the Project site. Impacts on habitat for this species would be considered adverse, but would not be expected to appreciably affect the overall population of these species given the amount of potentially suitable foraging habitat in the immediate vicinity. Therefore, impacts on southern grasshopper mouse would be considered less than significant. Therefore, no mitigation would be required.

URBAN/WILDLANDS INTERFACE

5.7-7 *Development of the proposed alignment would result in urban/wildlife interface impacts. **Significance: Implementation of Mitigation Measures 5.7-7a through 5.7-7e would reduce impacts to less than significant levels in this regard.***

Impact Discussion: Indirect impacts are addressed by guidelines in Section 6.1.4 of the MSHCP. Development in proximity to the MSHCP Conservation Area may result in edge effects that could adversely affect biological resources in the MSHCP Conservation Area. To minimize these edge effects, the MSHCP provides guidelines for drainage, toxics, lighting, noise, invasives, and barriers. The proposed alignment is adjacent to the Cleveland National Forest, which is a Conservation Area protected



by the MSHCP. The following impact analysis evaluates long-term operational implications of proposed alignment on biological resources in the MSHCP Conservation Area.

Urban and Stormwater Runoff (Drainage)

During operation of the proposed alignment, runoff carrying petroleum residues from vehicles using the proposed alignment could potentially impact water quality and associated species. Impacts on drainage would be considered potentially significant. Implementation of recommended Mitigation Measures 5.9-1a through 5.9-1c, and 5.9-2 in Section 5.9, HYDROLOGY AND WATER QUALITY, would reduce these impacts to less than significant.

Toxic Material

The proposed alignment would not use toxic chemicals or generate toxic byproducts. Therefore, there would be no impacts in this regard from the development of the proposed alignment, and no mitigation would be required.

Lighting

Night lighting would increase due to car headlights and Project related night lighting during and after completion of the Project alignment. Lighting of the Project alignment would be limited to proposed intersections. This lighting would inadvertently affect the behavior patterns of nocturnal and crepuscular (active at dawn and dusk) wildlife adjacent to these areas. Of greatest concern is the effect on small ground-dwelling animals that use the darkness to hide from predators, and on owls that are specialized night foragers. In addition, night lighting could deter wildlife movement adjacent to the proposed alignment. Night lighting could inhibit wildlife from using the habitat adjacent to lighted areas. This impact would be considered adverse and potentially significant because the proposed alignment is located adjacent to the Cleveland National Forest. Incorporation of recommended Mitigation Measures 5.7-7b and 5.7-7c, below, (i.e. shielding and Mitigation Measures 5.2-4a and 5.2-4b in Section 5.2, AESTHETIC, LIGHT, AND GLARE) would reduce Project-related night lighting to less than significant.

Noise

During operation of the proposed roadway alignment, noise impacts would increase over existing levels (refer to Section 5.6, NOISE, for existing and future noise levels). Wildlife species stressed by noise may disperse from the habitat in the vicinity of the proposed alignment. This impact would be considered adverse and potentially significant because the Project site is located adjacent to the Cleveland National Forest, which is a Conservation Area protected by the MSHCP. For planning purposes, it is assumed a noise level above of 60 dBA Leq would be a significant impact upon natural biological resources. Wildlife within the MSHCP Conservation Area would not be subject to noise that would exceed 60 dBA Leq (refer to Section 5.6, NOISE). The 60 dBA Leq noise contour extends approximately 200 feet from the centerline of the Project site, which is outside the Cleveland National Forest boundary. As such, the proposed alignment would result in less than significant impacts to biological resources located within the Cleveland National Forest.



Exotic Plant and Animal Infestations

The proposed alignment includes landscaping adjacent to the alignment, which would include the planting of native drought-tolerant species and ornamental species, some of which could be invasive. Seeds from invasive species may escape to natural areas and degrade the native vegetation. This impact would be considered adverse and potentially significant because the proposed alignment is located adjacent to the Cleveland National Forest. Mitigation Measures 5.7-7d would require the consideration of the proximity and the species of planned landscape areas adjacent to MSCHP Conservation Areas and the utilization of barriers to prevent invasive species from spreading from planned landscape areas into the MSCHP Conservation Areas. Incorporation of Mitigation Measures 5.7-7d would reduce this impact to less than significant.

The proposed Project would not create new areas of permanent water; therefore, it would not increase the likelihood of an exotic fish or amphibian infestation. The new roadway is an extension of existing development rather than an introduction of new development; therefore, it would not be expected to introduce non-native mammal or bird populations though it may bring them closer to the natural areas in the Cleveland National Forest than they currently inhabit. This impact would be considered adverse, but is expected to be less than significant with the City's participation in the Western Riverside MSHCP. Therefore, no mitigation would be required.

Trampling and Unauthorized Vehicle Use (Barriers)

The proposed alignment would increase human activity along the proposed roadway. This may include unauthorized public access, or illegal dumping. This impact would be considered adverse and potentially significant because the proposed alignment is located adjacent to the Cleveland National Forest. Mitigation Measure 5.7-7e would require the use of barriers, such as landscaping, rocks/boulders, fencing, walls, and/or signage, to deter and minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Incorporation of these recommended Mitigation Measure 5.7-7e would reduce this impact to less than significant.

PUBLIC/QUASI-PUBLIC LANDS

5.7-8 *Construction of the proposed alignment would impact public/quasi-public lands. **Significance: With implementation of recommended Mitigation Measure 5.7-8 the proposed alignment would result in less than significant impacts in this regard.***

Impact Discussion: Public/Quasi-Public lands are lands within public or private ownership that are expected to be managed for open space value and/or in a manner that contributes to the conservation of Covered Species. The proposed Project would impact a total of 8.27 acres of Public/Quasi-Public lands within the Mabey Canyon Debris Basin and Kroonen Channel, owned by the Riverside County Flood Control District. Of this impact, 2.28 acres would be permanently impacted (Kroonen Channel), while 5.99 acres of the impact would be temporarily impacted (Mabey Canyon Debris Basin) because the basin would be shifted back to accommodate the road. This impact would be considered a significant impact on the



assembly of the MSHCP reserve, and would require purchase and dedication of an equivalent amount of land into the MSHCP Reserve per Section 7.2.2 of the MSHCP. Implementation of recommended Mitigation Measure 5.7.5 would reduce this impact to less than significant.

JURISDICTIONAL IMPACTS

5.7-9 *Construction of the proposed alignment would impact jurisdiction under the USACE and CDFG. **Significance: With implementation of permit conditions imposed by the agencies, including the provision for providing mitigation, and recommended Mitigation Measures 5.7-2a and 5.7-2b, impacts associated with the proposed alignment area subject to USACE and CDFG purview would be less than significant.***

Impact Discussion: Delineation of jurisdictional waters within the Project site, conducted by RBF Consulting dated September 27, 2007, concluded that no isolated conditions were observed within the boundaries of the Project site; therefore, the RWQCB jurisdiction follows that of USACE jurisdictional “waters of the U.S.” (refer to Appendix 15.9).

Construction activities within jurisdictional areas of the USACE and CDFG will be subject to approval by the USACE 404 Permit, the CDFG 1602 Permit, the RWQCB 401 Permit, approval of a General Construction Activity Storm Water Permit and any other approvals deemed necessary during construction entitlement by the RWQCB, approval of Mabey Canyon Debris Basin modifications, Kroonen Canyon Channel modifications and regional storm drain facilities by the Riverside County Flood Control District, and an approval of Mabey Canyon Debris Basin dam modifications by California Division of Dam Safety.

As previously discussed, riparian areas and their associated streambeds are also under the jurisdiction of the USACE and CDFG. A total of 4.63 acres of waters of the U.S. are under the jurisdiction of USACE, 4.66 acres of jurisdiction under the RWQCB, and 9.77 acres of streambed are under the jurisdiction of CDFG. Implementation of recommended Mitigation Measures 5.7-2a and 5.7-2b would reduce impacts on jurisdictional impacts to less than significant.

As indicated in the *Delineation Report* prepared for the Project, there are no wetlands on the Project site. Therefore, the proposed Project would not result in impacts to wetlands.

CUMULATIVE IMPACTS

Threshold: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Development in the City would result in the cumulative loss of natural vegetation. However, each project is required to comply with the FESA and CESA, which protect Threatened and Endangered species. Additionally, projects would be required to



comply with the goals and policies in the City's *General Plan*, which protect plant and wildlife species and their habitats, ensure that impacts on biological resources are avoided or minimized during construction and development, and require adherence to policies within the Western Riverside MSHCP, which conserves habitat for 146 covered species. With compliance to Federal, State, and local regulations, and compliance with measures of the Western Riverside MSHCP, cumulative impacts to candidate, sensitive, or special status species would be reduced to less than significant.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Potentially Significant Impact.

Project Cumulative Contribution: Potentially Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.7-1a through 5.7-8.

Threshold: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Threshold: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, costal, etc.) through direct removal, filling, hydrological interruption, or other means.

Riparian habitat and other sensitive natural communities occur within the City. Development in the City would result in the cumulative loss of riparian habitat. Riparian habitat is protected by Section 1600 of the Fish and Game Code and Section 404 of the CWA. Additionally, the City's *General Plan* includes goals and policies that would avoid or minimize impacts to riparian areas. Each project is required to comply with Federal, State, and local regulations (FESA, CESA, CWA, and the City's *General Plan* goals and policies). In addition, the MSHCP has and will require mitigation to compensate for the loss habitat on projects previously processed through the MSHCP and for future projects in the area. With compliance to Federal, State, and local regulations, and compliance with measures of the Western Riverside MSHCP, cumulative impacts to riparian habitat would be reduced to less than significant.

Streams under the jurisdiction of the USACE, RWQCB, and CDFG are located within the City. The Federal and State laws and regulations (Sections 401 and 404 of the Clean Water Act and Section 1600 of the Fish and Game Code) would require a permit/agreement prior to alteration of these jurisdictional areas. Federal and State regulations would be required to be implemented prior to development activities.



Each project is required to obtain all appropriate permits for impacts on USACE and CDFG jurisdictional areas. Additionally, mitigation for the loss of jurisdictional areas is required to be no less than a 1:1 ratio. Each project shall also consult with the resource agencies (i.e., USFWS and CDFG) to ensure that permitting is adequate to satisfy requirements of Section 6.1.2 of the MSHCP. Additionally, the City's *General Plan* includes policies that would protect natural and biological resources within wetlands. With compliance to Federal, State, and local regulations, and compliance with measures of the Western Riverside MSHCP, cumulative impacts to wetlands would be less than significant. As indicated in the *Delineation Report* prepared for the Project site, there are no wetlands on the Project site. Therefore, the proposed Project would not contribute to cumulative impacts on federally protected wetlands.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Potentially Significant Impact.

Project Cumulative Contribution: Potentially Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.7-2a and 5.7-2b.

Threshold: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

According to the City's *General Plan*, lands within the City boundaries are largely urbanized and contain limited biological resources. As such, existing biological resources within the City boundaries are fragmented. However, the City's SOI includes large tracts of undeveloped habitat that may be subject to development. Development of these areas would lead to habitat fragmentation, which occurs when new development fragments undisturbed habitats. The City's *General Plan* includes policies that reduce further impacts to native, resident, or migratory wildlife corridors are avoided or minimized. Although implementation of the City's *General Plan* policies would reduce impacts, there would still be residual significant impacts on wildlife movement due to habitat fragmentation from development of vacant lands. Therefore, overall cumulative impacts to wildlife movement would be significant and unavoidable.

The proposed Project would remove local travel routes within the direct impact area; however, few native habitat areas would be located northeast of the proposed alignment. Therefore, the proposed Project would not be expected to substantially impact wildlife movement along local travel routes. In addition, there are several local travel routes remaining to the southwest of the alignment. Therefore, impacts on local wildlife movement would be considered less than significant and no mitigation would be required. The proposed Project would adversely affect regional wildlife



movement along a segment of Wardlow Wash within the Project impact area. This impact would be considered significant on a Project level. The City of Corona is a participant in the Western Riverside MSHCP, which was prepared to balance the goals of wildlife conservation and economic development. The MSHCP could not preserve all important biological resources; some are preserved while others are allowed to be developed. Fresno Canyon, located 1.5 miles west of the Project site, was identified for preservation by the MSHCP to maintain the linkage between the Cleveland National Forest and the Santa Ana River/Prado Basin while Wardlow Wash has not been identified for long-term preservation. Thus, although Wardlow Wash functions as a regional wildlife corridor between the Cleveland National Forest and the Santa Ana River/Prado Basin and impacts on wildlife movement along Wardlow Wash are considered significant, the impact is considered mitigated by the City of Corona's participation in the MSHCP. Therefore, the proposed Project would not result in cumulative considerable impacts to wildlife movement. Mitigation Measure 5.7-4 includes recommendations to encourage continued wildlife movement along this segment of Wardlow Wash.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Potentially Significant Impact.

Project Cumulative Contribution: Potentially Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Significant and Unavoidable Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.7-4.

Threshold: Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.

Threshold: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The City's compliance with measures of the Western Riverside MSHCP provides mitigation for impacts to biological resources resulting from development within Western Riverside County. Present and reasonably foreseeable future projects within the vicinity of the Project site are also subject to compliance with the requirements of the MSHCP, which would reduce the cumulative impact to biological resources to a less than significant level. Thus, cumulative impacts on biological resources within the City have been addressed and have been reduced to less than significant levels by the City of Corona's participation in the MSHCP.

The City of Corona does not have an oak tree preservation ordinance. However, as a guideline, the City referred to the County's oak tree ordinance for appropriate mitigation for oak trees impacted by the proposed Project. Mitigation Measure 5.7-2b requires Project impacts on oak trees to be replaced at a ratio of no less than 2:1.



Implementation of Mitigation Measure 5.7-2b would reduce the impact on oak trees to less than significant. Thus, cumulative impacts on oak trees within the Project area would be reduced to less than significant levels by the replacement of oak trees within jurisdictional areas. As such, the proposed Project would not result in a cumulative considerable impact in this regard.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Potentially Significant Impact.

Project Cumulative Contribution: Potentially Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.7-2a and 5.7-2b.

5.7.6 MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

SHORT-TERM (CONSTRUCTION) IMPACTS

- 5.7-1a Refer to Mitigation Measure 5.5-1a in Section 5.5, AIR QUALITY; Mitigation Measures 5.9-1a through 5.9-1c in Section 5.9, HYDROLOGY AND WATER QUALITY; and Mitigation Measures 5.6-1a through 5.6-1e, and 5.6-1g in Section 5.6, NOISE.
- 5.7-1b The following Construction Minimization Measures (Section 7.5.3 of the MSHCP) shall be implemented during Project construction to minimize impacts on biological resources during construction:
- Plans for water pollution and erosion control shall be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans shall describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans shall be reviewed and approved by the City of Corona, prior to construction.
 - Timing of construction activities shall consider seasonal requirements for breeding birds and migratory non-resident species covered under the Migratory Bird Treaty Act. Habitat clearing shall be avoided during species active breeding season, defined as March 1 to June 30.



- ❑ Sediment and erosion control measures shall be implemented until such time soils are determined to be successfully stabilized.
- ❑ Short-term stream diversions shall be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions shall consider effects on wildlife.
- ❑ Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
- ❑ Settling ponds where sediment is collected shall be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds shall be removed and diverted to a location where sediment cannot re-enter the stream or surrounding drainage area. Caution shall be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
- ❑ No erodible materials shall be deposited into water courses. Brush, loose soils, or other debris material shall not be stockpiled within stream channels or on adjacent banks.
- ❑ The footprint of disturbance shall be minimized to the maximum extent feasible. Access to the Project site shall occur on pre-existing access routes to the greatest extent possible.
- ❑ Equipment storage, fueling and staging areas shall be sited on non-sensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.
- ❑ The limits of disturbance, including the upstream, downstream and lateral extents, shall be clearly defined and marked in the field. Mitigation Monitoring Program personnel shall review the limits of disturbance prior to initiation of construction activities.
- ❑ During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by Covered Species that are outside of the Project footprint shall be avoided.
- ❑ Exotic species removed during construction shall be properly handled to prevent sprouting or regrowth.
- ❑ Training of construction personnel shall be provided.
- ❑ Ongoing monitoring and reporting shall occur for the duration of the construction activity to ensure implementation of best management practices (BMPs).



- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of Project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
- Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the Project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

5.7-1c Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area shall not be subject to noise that would exceed 60 dBA CNEL. Refer to Section 5.6, NOISE, for further discussion regarding the City's noise standards.

VEGETATION TYPES

5.7-2a The City of Corona shall obtain all appropriate permits for impacts on USACE and CDFG jurisdictional areas. Mitigation for the loss of jurisdictional areas shall consist of restoration of riparian habitat at no less than a 2:1 ratio to ensure no net loss of habitat. Any creation of habitat will be in kind and proportional to Project impacts. Native trees within the riparian habitat shall be replaced as follows per the City (Coletta 2008): coast live oaks 4:1; sycamore 3:1; cottonwood 3:1; willow 2:1; and scrub oak 2:1. Prior to issuance of a grading permit, a detailed restoration program shall be prepared for approval by the USACE and CDFG with the following items:

- *Responsibilities and qualifications of the personnel to implement and supervise the plan.* The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan will be specified.



- *Site selection.* The site for the mitigation will be determined in coordination with the City of Corona and the resource agencies. The site shall either be located on the Project site in a dedicated open space area or land will be purchased off the site.
- *Site preparation and planting implementation.* The site preparation will include: (1) protection of existing native species; (2) trash and weed removal; (3) native species salvage and reuse (i.e., duff); (4) soil treatments (i.e. imprinting, decompacting); (5) temporary irrigation installation; (6) erosion control measures (i.e. rice or willow wattles); (7) seed mix application; and (8) container species.
- *Schedule.* A schedule will be developed which includes planting to occur in late fall and early winter, between October 1 and January 30.
- *Maintenance Plan/Guidelines.* The maintenance plan will include: (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- *Monitoring Plan.* The Monitoring Plan will include: (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) performance criteria as approved by the resource agencies; (4) monthly reports for the first year, and reports every other month thereafter; and (5) annual reports for five years, which will be submitted to the resource agencies on an annual basis. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas.
- *Long-term preservation.* Long-term preservation of the site will also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

In addition, the City of Corona will shall provide the Determination of Biologically Equivalent or Superior Preservation (DBESP) with the proposed Mitigation Plan to the USFWS and CDFG for review. The resource agencies shall review the Project for consistency with Section 6.1.2 of the MSHCP (i.e., Riparian/Riverine).

5.7-2b As outlined in the Native Tree Survey prepared for the proposed Project, the following mitigation for removal of native trees shall be required by the Project:

- Prior to grading, orange snow fencing shall be installed around trees (outside the dripline) that would not be impacted by construction. Fencing shall be in place and inspected by a qualified Biological Monitor prior to commencement of grading. This fencing shall remain in place throughout the entire period of



Project construction, and shall be periodically checked by the Biological Monitor.

- For each native tree removed, trees will be replaced at the ratios indicated in Table 5.7-7.

**Table 5.7-7
Native Tree Mitigation**

Species	Total
(<i>Quercus agrifolia</i>) Coast live oak	4:1
(<i>Quercus berberidifolia</i>) Scrub oak	2:1
(<i>Platanus racemosa</i>) Western sycamore	3:1
(<i>Populus fremontii</i>) Fremont cottonwood	3:1
(<i>Salix goodingii</i>) Black willow	2:1

- The Landscape Architect shall design the replacement trees into the riparian revegetation to replace the habitat value of the woodlands and trees removed by the proposed alignment. At least 5.06 acres of replacement habitat shall be planted to compensate for the loss of coast live oak woodland habitat. The Planting Plan will be reviewed by a qualified biologist and to ensure that the replacement oak trees are located in such a way to provide comparable habitat quality.
- All replacement trees shall be located in the riparian and oak woodland revegetation areas if possible. If spacing requirements cannot accommodate the number of replacement trees, the trees may be planted adjacent to the proposed road as a transition to open space.
- Planting specifications shall consider the following:
 - a. Newly planted trees shall be planted above grade and maintained for five years, including irrigation, weed control, herbivore protections, and replacement.
 - b. Amending the backfill soil with wood shavings, oak leaf-mold, etc. is not recommended when existing soil is high in natural organic matter with a sandy loam texture.
 - c. Recommendations for the need of planting amendments and drainage systems shall be based on soil tests of this Project site and approved by the City.



- d. Any City approved work within the driplines of saved trees, including branch removal, shall be under the inspection of a qualified arborist.
- e. Landscaping requiring irrigation shall not be planted within the dripline of oaks due to the susceptibility of native oaks to root rot caused by excessive unseasonable irrigation. The design and installation of landscape irrigation systems outside the dripline of the oaks shall be such that the area within the dripline is not wetted during operation of the system. In addition, surface runoff from impermeable surfaces shall be directed away from oaks; where natural topography has been altered, provisions shall be made for drainage away from trunks of oaks so that water will not pond or collect within the dripline of any oak.

GENERAL HABITAT LOSS AND WILDLIFE LOSS

- 5.7-3 No mitigation measures are required.

WILDLIFE MOVEMENT AND HABITAT FRAGMENTATION

- 5.7-4 It is recommended that the base of the manufactured slope west of the constructed roadway be vegetated with native species to encourage the continued use of Wardlow Wash for wildlife movement. This area may count toward the mitigation requirement for riparian vegetation (Mitigation Measure 5.7-2a), oak tree replacement (Mitigation Measure 5.7-2b), and special status plant relocation (Mitigation Measure 5.7-5) if determined to be appropriate for these mitigation areas.

The culvert under Paseo Grande should be designed following guidelines in Section 7.5.2 of the MSHCP. Guidelines in Section 7.5.2 recommend a width of at least five feet to allow for passage by medium-sized wildlife. (The existing 8-foot culvert under Paseo Grande exceeds these minimum requirements.) In addition, the crossing should be designed in a manner which allows a dry crossing under most circumstances. This may include designing an elevated bench above the normal high water line or providing a textured gentle slope up the side of the culvert/undercrossing. Barriers to small terrestrial wildlife movement should be encouraged along new and modified roadways, so that they are guided toward appropriate undercrossings.

SPECIAL STATUS PLANTS

- 5.7-5 If construction occurs after fall 2008, a pre-construction survey during the peak flowering period for the intermediate mariposa lily and Coulter's matilija poppy, approximately March through June, shall be conducted by the Project biologist the spring prior to construction. The limits of each plant location within the impact area shall be clearly delineated with brightly colored flagging. The plants shall be mitigated by transplantation



(for matilija poppy), bulb collection (mariposa lily), and seed collection (both matilija poppy and mariposa lily). The plants, seeds or bulbs shall then be placed into a suitable mitigation site in the undeveloped portion of the Project site or at an approved off-site location. A qualified biologist shall be selected by the Project Applicant to prepare and implement the mitigation plan. The detailed mitigation plan will include the following requirements and be approved by the City of Corona prior to issuance of the grading permit:

- Seed ripeness will be monitored every two weeks by a qualified biologist and/or a qualified seed collector at the existing locations of lilies and poppies to determine when the seeds are ready for collection. A qualified seed collector shall collect all of the seeds from the plants to be impacted when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or institution with appropriate storage facilities.
- Following the seed collection, the bulbs/plants shall be removed by bulb/plant collection, block transplantation method, or root cuttings, whichever is believed to be the most successful method for each species. The bulbs/plants shall either be transplanted directly or stored by a qualified nursery or institution with appropriate storage facilities. If the bulbs/plants are collected and the block transplantation method is not used, then the top 12 inches of topsoil from the lily/poppy locations shall be scraped, stockpiled, and used at the selected mitigation site.
- The mitigation site shall be located in dedicated open space on the Project site or at an off-site mitigation site. The mitigation site will not be within the road easement and will not be located in a fuel modification zone. The mitigation site shall not attempt to enhance existing populations and shall not be impacted by any pesticides or herbicides used on adjacent properties.
- The lily/poppy mitigation site shall be prepared for seeding as described in a conceptual restoration plan.
- The topsoil shall be respread in the selected location as approved by the Project biologist. Approximately 60 to 80 percent of the seeds and bulbs/plants collected shall be spread/placed in the fall following soil preparation. The remainder of the seed and bulbs/plants shall be kept in storage for subsequent seeding, if necessary.
- A detailed maintenance and monitoring plan shall be developed by a qualified biologist. The plan shall include detailed descriptions of maintenance appropriate for the mitigation site, monitoring requirements, and annual report requirements, and shall have the full authority to suspend any operation in the study area which is, in the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency



of an action with the restoration plan shall be resolved by the City of Corona and the biologist.

- The performance criteria for intermediate mariposa lily and Coulter's matilija poppy will be 80 percent of transplanted bulbs/plants established within the mitigation site producing leaves each year of the long-term maintenance and monitoring program. If the performance criteria is not achieved following the first season, remediation measures shall be implemented prior to seeding with the remaining contingency seed and bulbs. Remedial measures shall include at a minimum: soils testing, control of invasive species, soil amendments, and physical disturbance (to provide scarification of the seed) of the planted areas by raking or similar actions. Additional mitigation measures may be suggested as determined appropriate by the Project biologist.

SPECIAL STATUS WILDLIFE

Least Bell's Vireo

5.7-6a The habitat creation included in Mitigation Measure 5.7-2a will be required to mitigate for impacts on the least Bell's vireo. In addition, the following conditions will apply:

- Vegetation clearing activities shall occur during the non-breeding season (September 16 to March 14). If the construction is scheduled to occur during the breeding season, a pre-construction protocol survey will be conducted the spring/summer prior to construction to confirm the absence of this species from the impact area and vicinity (i.e., within 500 feet) prior to the start of construction activities.
- The 2008 focused survey results shall be provided to the USACE, USFWS, and CDFG for consideration during jurisdictional permitting and review of the revised DBESP.

Burrowing Owl

5.7-6b Pursuant to the MSHCP Objective 6, for burrowing owl, a pre-construction burrowing owl survey shall be conducted prior to issuance of a grading permit to verify the presence/absence of the owl on the Project site. Within thirty days of the onset of construction activities, a qualified biologist shall survey within 500 feet of the Project site for the presence of any active owl burrows. Any active burrow found during survey efforts shall be mapped on the construction plans. If no active burrows are found, no further mitigation would be required. Results of the surveys shall be provided to the City of Corona.

If nesting activity is present at an active burrow, the active site shall be protected until nesting activity has ended to ensure compliance with



Section 3503.5 of the California Fish and Game Code. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest.

If an active burrow is observed during the non-nesting season, the nest site shall be monitored by a qualified biologist, and when the raptor is away from the nest, the biologist will either actively or passively relocate the burrowing owl based on direction from the WRC RCA. The biologist shall then remove the burrow so the burrowing owl cannot return to the burrow.

- 5.7-6c Seven days prior to the onset of construction activities during the raptor nesting season (February 1 to June 30), a qualified biologist shall survey within 500 feet of the Project impact area for the presence of any active raptor nests (common or special status). Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. To protect any nest site, the following restrictions to construction activities are required until nests are no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any occupied nest, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any occupied nest, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the known nest shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest.

If an active nest is observed during the non-nesting season, the nest site shall be monitored by a qualified biologist, and when the raptor is away from the nest, the biologist will flush any raptor to open space areas. A qualified biologist, or construction personnel under the direction of the qualified biologist, shall then remove the nest site so raptors cannot return to a nest.



URBAN/WILDLANDS INTERFACE

- 5.7-7a Refer to Mitigation Measures 5.9-1a through 5.9-1c, and 5.9-2 in Section 5.9, HYDROLOGY AND WATER QUALITY.
- 5.7-7b Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.
- 5.7-7c Refer to Mitigation Measures 5.2-4a and 5.2-4b in Section 5.2, AESTHETICS, LIGHT, AND GLARE, regarding light spillover and glare mitigation measures.
- 5.7-7d When approving landscape plans for proposed landscaping adjacent to the MSHCP Conservation Area, the City shall consider the invasive, non-native plant species listed in the MSHCP and will require revisions to landscape plans to avoid the use of invasive species for the landscaping adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list will include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features.
- 5.7-7e Where appropriate, barriers shall be placed in individual Project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.

PUBLIC/QUASI-PUBLIC LANDS

- 5.7-8 The DBESP Report includes replacement of Public/Quasi-public land permanently impacted by the proposed alignment through the purchase of equivalent or superior quality habitat at a 1:1 ratio that shall be dedicated in fee title or conservation easement to the Western Riverside County Regional Conservation Authority. The resource agencies shall review the proposed acquisition to ensure that the lands to be acquired by the City of Corona are of equivalent or superior quality to the Public/Quasi-public lands impacted by the proposed alignment. The dedicated lands shall be managed by the Western Riverside County Regional Conservation Authority in a manner that is consistent with the goals of the MSHCP.

JURISDICTIONAL IMPACTS

- 5.7-9 Refer to Mitigation Measures 5.7-2a and 5.7-2b.



CUMULATIVE IMPACTS

Refer to Mitigation Measure 5.7-1a through 5.7-8.

5.7.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant and unavoidable impacts related to biological resources have been identified following implementation of recommended Mitigation Measures 5.7-1a through 5.7-8 and compliance with the MSHCP. Incorporation of the mitigation measures discussed above would reduce impacts of the proposed alignment to less than significant levels with regards to biological resources.



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