CHAPTER 3.0 – SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT WHICH CAN BE MITIGATED

This chapter addresses technical issues for which one or more significant and mitigable impacts have been identified based on implementation of the proposed project; including the topics of biological resources, cultural (and historical) resources, and paleontological resources. The subchapters below address existing conditions, present guidelines for the significance determination, analyze the potential effects of project implementation against existing and anticipated future conditions (including the potential cumulative effect of other likely projects also being implemented), identify potential mitigation measures and confirm that implementation of those measures would lower identified significant impacts to less than significant levels.

3.1 Biological Resources

Biological resources were addressed in Section 4.3 of the EOMSP Final EIR for the entire EOMSP, which concluded that impacts to non-native grassland, coastal sage scrub, western spadefoot toad, burrowing owl, raptors, and vernal pool species are significant and unmitigable. Since the approval of the EOMSP, the MSCP was approved in 1997 by the County, which addresses impacts to biological resources on a regional basis and provides for long-term conservation of species addressed in the EOMSP FEIR. In addition, several wildlife species have been listed as threatened or endangered. The entire project site has been identified as Amendment Areas to the MSCP. In order for the proposed project to be approved and take authorization to be given to the landowner, the amendment process must be first completed as specified in the MSCP Subarea Plan. Processing an amendment to the MSCP requires the preparation of a CEQA document, a biological resources report, identification of any mitigation required by County Ordinance and concurrence by the Wildlife Agencies (i.e., U.S. Fish and Wildlife Service [USFWS] and California Department of Fish and Game [CDFG]).

This subchapter is based, in part, on information and conclusions reached in the previously certified EOMSP Final EIR, as well as the project-level analysis contained in the Biological Technical Report for Otay Crossings Commerce Park prepared by HELIX Environmental Planning, Inc. (HELIX) in May 2010, as well as other supporting biological resources reports (contained in Appendix F to this SEIR), which was prepared in accordance with Mitigation Measure 3A of the prior Final EIR. The technical report also satisfies the MSCP Minor Amendment process requirements.

3.1.1 Discussion of Existing Conditions Relating to Biological Resources

This subchapter describes existing biological conditions within the proposed project site and vicinity, identifies associated regulatory requirements and evaluates potential impacts (including cumulative impacts) and mitigation measures related to implementation of the proposed project. The study area for the biological resources report consisted of the project site, its immediate surroundings plus the off-site improvement areas required to implement road ROW dedications and a sewer gravity lines and force main (as depicted in Figure 1-2 in this report). Initially, surveys were performed on the site in 2000 and 2001 as part of the proposed SR-11 project (HELIX 2002). Many of these surveys were subsequently updated in 2005 and 2006 (HELIX 2010). Surveys included vegetation mapping, a jurisdictional delineation, rare plant surveys, and focused surveys for CDFG species of special concern burrowing owl (*Athene cunicularia*), federally listed threatened coastal California gnatcatcher (gnatcatcher; *Polioptila californica californica*), federally listed endangered Quino checkerspot butterfly

(Quino; *Euphydryas editha quino*), and vernal pool studies for the federally listed endangered San Diego and Riverside fairy shrimp (*Branchinecta sandiegonensis* and *Streptocephalus woottoni*, respectively). Additionally, rare plant, gnatcatcher, Quino, and burrowing owl surveys were conducted by EDAW for the County EOMSP area update (EDAW 2001a and 2001b), and rare plant, gnatcatcher, Quino, fairy shrimp and burrowing owl surveys were conducted for Caltrans for SR-11 (URS Corporation [URS] 2005).

As previously noted, the proposed project site is currently undeveloped open space, and features non-native grassland on the majority of the property while coastal sage scrub patches occur on the steeper slopes. The drainages on site are primarily unvegetated, with small sections of non-native vegetation. As a result of the existing development and U.S. Border Patrol use in the area, biological resources on the site are fairly disturbed. Some isolated portions of the site, however, still support higher quality biological resources.

Regional Context

The project site is located within the South County Segment of the County's MSCP Subarea Plan and contains areas designated as MSCP Major Amendment Areas, Minor Amendment Areas, and Minor Amendment Areas Subject to Special Considerations (see Chapter 1.0, *Project Description,* and Figure 1-11). The proposed project site is identified as an area requiring on-site conservation if specific resources (i.e., vernal pools, Group A and B plant species) are observed.

The bulk of the site does not function as a wildlife corridor for the region because it is largely open and disturbed. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or artificial constraints. Local corridors such as hillsides and tributary drainages provide access to resources such as food, water, and shelter. Animals can use these corridors to travel among different habitats (i.e., riparian and upland habitats), which they may use at different points throughout their life history. Regional corridors link two or more large areas of open space, providing avenues for movement, dispersal, and migration as well as contact between otherwise distinct populations of wildlife, including large mammals such as mule deer, bobcats (*Lynx rufus*), and mountain lions. The project site is located in a portion of Otay Mesa characterized by non-native grassland that was historically in agriculture. Large areas of non-native grassland bound the site to the west, north, and east, and the International Border is located just south of the site. Industrial and commercial development occurs farther to the west. The project site and immediate vicinity are subject to frequent patrolling by the Border Patrol, as well as off-road vehicle use, and as a landing site for parachuters. There is no connection for wildlife movement into Mexico, as (1) the border fence greatly inhibits wildlife movement, and (2) the City of Tijuana is entirely developed in the areas south of the project site. The project site does not support any riparian corridors that might be used for wildlife movement, nor does it connect to any such corridors off site. Although the site itself supports habitat that could be used by a wide variety of species, including coyote, bobcat, skunks, raccoons, and jackrabbits, it wouldn't be considered a wildlife corridor since the site does not concentrate animal movement and direct it toward any particular resource. No local or regional wildlife corridors are identified on site.

Vegetation Communities

Project Site and Off-site Improvement Areas

Nine vegetation communities, plus a number of road pools, occur within other vegetation communities on site and within the off-site road and sewer line improvement areas along Alta, Enrico Fermi, Otay Mesa and Airway Roads. Habitats within the project site and off-site improvement areas include vernal pool, tamarisk scrub, disturbed wetland, Diegan coastal sage scrub, non-native grassland, native grassland, agriculture, disturbed habitat, and developed land (Table 3.1-1). Descriptions of these communities are provided below. Vegetation community names and codes follow Holland (1986) and Oberbauer (1996). Figure 3.1-1, *Existing Vegetation and Sensitive Resources*, provides a graphic representation of vegetation communities on and off site. Vegetation communities are represented in Figure 3.1-2, *Summary Wetland Delineation*.

Vernal Pool. Vernal pools are highly specialized communities formed under specific physical conditions, including a subsurface hardpan or claypan that inhibits the downward percolation of water, and a topography characterized by a series of low hummocks (mima mounds) and depressions (vernal pools). Under these conditions, water collects in the depressions during the rainy season, gradually evaporating following the rain. In addition to holding water, vernal pools support one or more of the plant species listed in the U.S. Army Corps of Engineers (Corps) vernal pool plant indicator species list (Corps 1997). Among other potentially occurring animal species within vernal pools, San Diego fairy shrimp and Riverside fairy shrimp are federally listed as endangered. Vernal pools are a Tier I habitat under the Biological Mitigation Ordinance (BMO) because they support a number of sensitive plant and animal species, are limited in distribution, and/or are declining in area.

No vernal pools occur on site. Two vernal pools occur within the off-site Sewer Option B-1 and B-2 alignment alternatives on the Paragon site.

Tamarisk Scrub. Tamarisk scrub is characterized as a weedy, virtual monoculture of any of several tamarisk species (*Tamarix* spp.), usually supplanting native vegetation following major disturbance. Tamarisk scrub occurs in sandy or gravelly braided washes or intermittent streams, often in areas where high evaporation increases the stream's saltiness. Tamarisk scrub occupies 0.97 acre on site, of which 0.73 acre occurs along drainages.

Disturbed Wetland. This community is dominated almost exclusively by exotic wetland species within areas that have undergone periodic disturbances. A total of 0.03 acre of disturbed wetland occurs on site within a drainage in the southeastern corner of the property.

Native Grassland. Native grassland is a community dominated by perennial native grasses. The majority of native grasslands in California have been displaced by non-native grassland dominated by introduced annual species; however, native grasslands persist in areas as small isolated islands. Approximately 0.1 acre of native grassland occurs alongside a drainage in the off-site improvement areas. These patches are dominated by saltgrass (*Distichlis spicata*) intermingled with upland non-native grasses such as oats (*Avena* spp.).

Diegan Coastal Sage Scrub (including disturbed). Diegan coastal sage scrub is one of the two major shrub types that occur in California. This habitat type occupies xeric sites characterized by shallow

soils. Sage scrub is dominated by subshrubs whose leaves abscise during drought. The Diegan coastal sage scrub on site contains a diverse suite of plant species including California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), coyote brush (*Baccharis pilularis*), and laurel sumac (*Malosma laurina*). Approximately 8.7 acres of Diegan coastal sage scrub (including 0.9 acre of disturbed) occurs in patches on three hills in the eastern portion of the site and 0.1 acre occurs in the off-site improvement areas.

Non-native Grassland. Non-native grassland areas may have supported native grassland in the past, but have been overrun by exotic, introduced annuals. The flora of non-native grasslands includes a dense to sparse cover of introduced grasses and often numerous species of showy-flowered, native, annual forbs (Holland 1986). This habitat is often associated with deep, fine-textured soils with some clay content. Introduction of exotic grasses in California due to grazing and agricultural practices, coupled with severe droughts, has contributed to the conversion of native grasslands to non-native grassland (Jackson 1985). Whereas native grasslands supported mostly perennials, such as needlegrass (*Nasella* sp.), non-native grasslands (including those on site) support mostly annuals. Regardless of species composition, grasslands throughout the County serve as valuable raptor foraging habitat and may have additional value if they support native forbs. Characteristic species of the non-native grasslands on site include oats (*Avena* sp.), red brome (*Bromus madritensis* ssp. *rubens*), ripgut (*Bromus diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Portions of the site, especially in the central and northeastern areas, are dominated by mustard. Non-native grassland is the dominant vegetation community on site, covering approximately 278.5 acres. An additional 19.0 acres of non-native grassland occurs in the off-site improvement areas under Sewer Option A, while 23.5 acres occurs off-site in the off-site improvement areas under Sewer Option B-1 and 22.9 acres under Sewer Option B-2.

Eucalyptus Woodland. Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced tree species. This species is often planted purposely but can also spread under appropriate conditions. Approximately 1.0 acre of eucalyptus woodland occurs on site.

Agriculture. A small portion of an off-site agricultural field is mapped within the property boundary in the eastern portion of the site, comprising less than 0.1 acre. Approximately 0.7 acre of agriculture are mapped in the off-site improvement areas.

Disturbed Habitat. Disturbed habitat supports either no vegetation or a cover of non-native weedy species that are adapted to a regime of frequent disturbance. Many of the characteristic species of this habitat are also indicator species of annual grasslands, although disturbed areas tend to be dominated more by forbs than grasses. Characteristic species include mustard, star thistle (*Centaurea melitensis*), fennel (*Foeniculum vulgare*), and Russian thistle (*Salsola tragus*). Disturbed areas, namely dirt roads associated with Border Patrol activities, cover approximately 22.2 acres on site, and additional 5.0 acres occur in off-site improvement areas under Sewer Option A, while 5.8 acres occurs off-site in the off-site improvement areas under Sewer Option B-1 and 5.4 acres under Sewer Option B-2.

A total of 31 water-holding basins were mapped within disturbed habitat on site. A basin is considered a vernal pool if it supports plants identified as vernal pool species by (USFWS 1987). Natural basins that support no vernal pool species or that occur in drainages are defined as road pools. The site supports 31 road pools, totaling 0.20 acre. Four road pools, totaling 0.04 acre, occur in the off-site improvement areas.

Developed. Developed areas include paved roads, and existing developments with industrial or commercial land uses on site. The project site contains less than 0.1 acre of developed land, and an additional 5.7 acres occur in the off-site improvement areas under Sewer Options A and B-2, while 4.7 acres occurs off-site in the off-site improvement areas under Sewer Option B-1.

Jurisdictional Areas

Project Site and Off-site Improvement Areas

Areas under Corps, CDFG and County RPO wetland jurisdiction occur on and/or off site. A formal jurisdictional delineation was completed according to the Corps delineation guidelines within the proposed development areas of the site (HELIX 2005). Figure 3.1-2 provides a graphic representation of existing jurisdictional and non-jurisdictional areas.

Corps Jurisdiction. All areas with depressions or drainage channels were evaluated for the presence of Waters of the U.S., including jurisdictional wetlands. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was dug and described. The area was then determined to be a federal (Corps) wetland if it satisfied the three wetland criteria (vegetation, hydrology and soil) described within the Wetlands Delineation Manual (Environmental Laboratory 1987). In most cases, two sample points were evaluated, one inside the suspected wetland, and one where the hydrology and/or the vegetation criteria were not satisfied. Drainages lacking evidence of wetland hydrology (i.e., inundation for more than five percent of the growing season) were considered Waters of the U.S. Corps jurisdictional areas comprise 0.34 acre on site, including 0.03 acre of disturbed wetland and 0.31 acre of non-wetland Waters of the U.S. (Table 3.1-2). A total of 0.01 acre of Corps jurisdictional non-wetland Waters of the U.S. occur within the off-site improvement areas under Sewer Option A (and 0.02 acre under Sewer Options B-1 and B-2).

CDFG Jurisdiction. CDFG jurisdictional areas were determined based on the presence of any one of the three wetland criteria noted under Corps jurisdiction, above, being present. State (i.e., CDFG) jurisdictional areas comprise 1.12 acres on site and 0.01 acre within the off-site improvement areas under Sewer Option A (and 0.02 under Sewer Options B-1 and B-2). In total, 0.73 acre of tamarisk scrub, 0.03 acre of disturbed wetland, and 0.37 acre of streambeds were mapped as CDFG habitat for the project (Table 3.1-2). An additional 0.24 acre of tamarisk scrub occurring on site was not considered jurisdictional to CDFG, as these areas do not occur along CDFG streambeds.

County RPO Wetlands. The County RPO includes protections for wetlands meeting one of the three following attributes: (1) at least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) the substratum is non-soil and is saturated with water or covered by water at some time during the growing season each year. County RPO wetlands include 0.03 acre of disturbed wetland in the southeastern corner of the site (Table 3.1-2). The off-site improvement area along Alta Road contains a portion of the wetland buffer for a small stand of disturbed mule fat scrub (RPO wetland) occurring off site, but outside of the road improvement area.

Sensitive Resources

Sensitive resources are those defined as (1) habitat areas or vegetation communities that are unique, of relatively limited distribution or of particular value to wildlife and (2) species that have been given

special recognition by federal, state or local government agencies and organizations due to limited, declining or threatened populations. Figure 3.1-1 provides a graphic representation of sensitive resources on site.

Sensitive Vegetation Communities

The following vegetation communities within the project site and in the off-site improvement areas are considered sensitive or are regulated by the Corps, CDFG, USFWS, and/or County: disturbed wetland, native grassland, Diegan coastal sage scrub (including disturbed), and non-native grassland. Although it is not considered sensitive, eucalyptus woodland has the potential to support nesting raptors, which are protected under the federal Migratory Bird Treaty Act (MBTA).

Listed or Sensitive Plant Species with Potential to Occur

Table 3.1-3 presents listed or County-sensitive plant species with potential to occur on and off site. Sensitive plant surveys were conducted in 2000, 2005, and 2006 (HELIX 2010).

Listed or Sensitive Plant Species Observed

Seven sensitive plant species were observed on site: Otay tarplant (*Deinandra conjugens*), California adolphia (*Adolphia californica*), San Diego barrel cactus (*Ferocactus viridescens*), San Diego marsh-elder (*Iva hayesiana*), variegated dudleya (*Dudleya variegata*), San Diego County viguiera (*Viguiera laciniata*), and small-flowered morning glory (*Convolvulus simulans*). Surveys for listed species were not conducted off site.

Listed or Sensitive Animal Species with Potential to Occur

Table 3.1-4 presents listed and/or County-sensitive animal species that have a potential to occur on- and off site based on proximity to known populations and the vegetation communities present.

Listed or Sensitive Animal Species Observed

Eleven sensitive animal species have been observed/detected on site since 2000; additionally, the project site is within the territory of a golden eagle (*Aquila chrysaetos*) pair. Focused surveys for the burrowing owl, gnatcatcher, Quino, and fairy shrimp were conducted. In 2006, eight and possibly nine pair of burrowing owls were observed along the southern and western edges of the project boundary. Four pairs had burrows immediately off site, and are assumed to use at least a portion of the site as their territory. No owls were observed in the central and eastern portions of the site during multiple surveys.

No gnatcatchers were detected on site during 2000 and 2006 surveys. No Quino were detected on site during protocol surveys conducted in 2005 or 2006; however, three individuals were reported in 2000 within non-native grassland in the southern portion of the site. Fairy shrimp were detected in two road pools in the northern and northeastern portions of the site during 2005 and 2006 surveys.

Western spadefoot toads (*Spea hannondii*) were detected in five road pools in the northeastern portion of the site. One coastal western whiptail (*Cnemidophorus tigris multiscutatus*) was observed in the

southeastern portion of the site and one in the northeastern corner. They likely occur throughout the coastal sage scrub areas on site. Two individual California horned larks (*Eremophila alpestris actia*) were observed in non-native grassland in the southeastern portion of the site. Two individual loggerhead shrikes (*Lanius ludovicianus*) were observed within non-native grassland in 2005; however, eight individuals and one active nest were observed in 2000. They were also observed throughout the lower portions of the site in 2006. Two individual northern harriers (*Circus cyaneus*) of undetermined sex were observed on site. One was within non-native grassland in the central portion of the site and another one in non-native grassland along the southern property boundary. One grasshopper sparrow (*Ammodramus savannarum*) was detected in 2005 within non-native grassland in the central portion of the site; however, five individuals were observed in 2006 in the lower half of the site.

In addition to burrowing owl nests observed in 2005, one active red-tailed hawk (*Buteo jamaicensis*) nest was observed in eucalyptus woodland in the northwestern portion of the site. Several other raptor species have been observed in vicinity of the project site, including golden eagle (*Aquila chrysaetos*), northern harrier, white-tailed kite (*Elanus leucurus*) and American kestrel (*Falco sparverius*). Although no additional nests were detected, there is high potential for raptor species to nest in the stands of eucalyptus trees on site (or in the grasslands, for the northern harrier).

Regulatory Framework

Biological resources are subject to regulatory review by the federal government, State of California and County. The federal government administers non-marine plant- and wildlife-related issues through the USFWS, while wetlands and Waters of the U.S. issues are administered by the Corps. California law relating to wetland, water-related and wildlife issues is administered by the CDFG. The County's review includes project consistency with local ordinances and regulations.

Federal Government

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the federal ESA. Section 9(a) of the federal ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." 'Harm' and 'harass' are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d), 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. A special rule under Section 4(d) of the federal ESA was finalized which authorizes "take" of certain protected species under approved Natural Communities Conservation Programs (NCCPs), which are administered by the states. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In such a case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' (in this case, the gnatcatcher) use of the site and Corps jurisdictional areas. Section 10(a) allows issuance of permits for 'incidental' take of endangered or threatened species with

preparation of a habitat conservation plan (HCP). The term 'incidental' applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity.

All migratory bird species that are native to the United States or its territories are protected under the MBTA, as amended under the Migratory Bird Treaty Reform Act (MBTRA) of 2004 (FR Doc. 05-5127; USFWS 2004). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active raptor nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the Corps under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. It is currently assumed that a Nationwide 39 Section 404 permit would be needed for the proposed project.

State of California

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes CDFG to enter into a memorandum of agreement for take of listed species for scientific, educational or management purposes.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport and commerce in plants that are listed. The California ESA followed NPPA and covers both plants and animals that are determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

The golden eagle and white-tailed kite are considered State Fully Protected Species. Fully Protected species may not be taken or possessed at any time and no state licenses or permits may be issued for their take except for collecting theses species necessary for scientific research and relocation of the bird species for the protection of livestock (Fish and Game Code Sections 3511, 4700, 5050, and 5515).

The California Fish and Game Code (Sections 1600 et seq.) requires a Streambed Alteration Agreement with CDFG for projects affecting riparian and wetland habitats. It is assumed that the Proposed Project would require a Section 1602 Streambed Alteration Agreement from CDFG.

CEQA and its implementing guidelines (CEQA Guidelines) require projects with potentially significant effects (or impacts) on the environment and over which a planning/lead agency would exercise discretionary review to be submitted for environmental review. Mitigation for significant impacts to the environment is determined through the environmental review process, in accordance with existing laws and regulations.

County of San Diego

The project site lies within the South County Segment of the County's MSCP Subarea Plan. The majority of the site is designated as a Minor Amendment Area, but the southern portion is designated as a Minor Amendment Area Subject to Special Considerations, and a small area along the northeastern property boundary is designated as a Major Amendment Area (Figure 1-11). These Major and Minor Amendment Areas do not have take authority under the MSCP Subarea Plan until the Amendment process has been completed. The proposed project's amendment would authorize impacts to 38.3 acres of land on site designated Minor Amendment Area Subject to Special Consideration and 225.3 acres of land on site designated Minor Amendment Area. No impacts would occur to the Major Amendment Area. Additionally, the County is undergoing an Amendment process for the Quino checkerspot butterfly for the entire County MSCP Subarea, including the Major and Minor Amendment Areas within the project area. Should the proposed Amendments be approved, this project would not be subject to any additional requirements regarding the County Subarea Plan or other further requirements related to the Quino.

Processing a Minor Amendment to the MSCP requires preparation of a CEQA document, a biological resources report, identification of any mitigation required by the BMO, and concurrence by the local offices of the USFWS and CDFG. If biological resources reports associated with future development applications do not identify sensitive resources, it is envisioned that biological mitigation requirements for Minor Amendment Areas will take place off site, unless those sensitive habitats requiring preservation, as proposed in the previously certified EIR, are identified on site.

The Minor Amendment Areas with Special Considerations are transitional areas located primarily between the Major and Minor Amendment Areas where the likelihood of the presence of biologically sensitive resources is higher. The process for a Minor Amendment Area with Special Considerations is similar to Minor Amendment Area, but depending on the results of the biological resources report, on-site preservation may be required if particularly sensitive species are identified.

Lands designated as Major Amendment areas under the County's MSCP Subarea Plan include core habitat areas essential to many MSCP covered species. Take authorization for Major Amendment Areas would not be authorized until the Amendment process has been completed. Major Amendments must conform to the County Subarea Plan and the BMO, must be authorized by the USFWS and CDFG, and be in conformance with all applicable laws and regulations, including CEQA, NEPA, and federal and California ESAs. Currently, a Major Amendment is in process for the Quino within the County Subarea, including the subject property.

The BMO is the mechanism by which the County implements the MSCP at the project level within the unincorporated area to attain the goals set forth in the County's MSCP Subarea Plan. The BMO contains design criteria and mitigation standards which, when applied to projects requiring discretionary permits, protect habitats and species and ensures that a project does not preclude the viability of the MSCP Preserve System. In this way, the BMO promotes the preservation of lands that are integral components of a viable ecosystem, referred to as Biological Resource Core Areas (BRCAs). Land that meets any of the following criteria below is considered a BRCA. BRCAs are considered significant resources under MSCP and are required to be avoided to the maximum extent practicable.

Under the BMO, habitat is considered a BRCA if it meets one of the following criteria:

- The land is shown as pre-approved mitigation area on the wildlife agencies' pre-approved mitigation map;
- The land is located within an area of habitat which contains biological resources that support or contribute to the long-term survival of sensitive species and is adjacent to preserved habitat that is within the Pre-approved Mitigation Area on the wildlife agencies' pre-approved mitigation map;
- The land is part of a regional linkage/corridor;
- The land is shown on the Habitat Evaluation Map as Very High or High and links significant blocks of habitat, except that land which is isolated or links small, isolated patches of habitat and land that has been affected by existing development to create adverse edge effects shall not qualify as a BRCA;
- The land consists of or is within a block of habitat greater than 500 acres in area of diverse and undisturbed habitat that contributes to the conservation of Sensitive Species; or
- The land contains a high number of sensitive species and is adjacent or contiguous to surrounding undisturbed habitats.

Much of the project site is disturbed and has a high non-native weedy component. Because it is located on the western edge of a habitat block larger than 500 acres that contributes to conservation of a large number of sensitive species (and portions of the on-site habitat are mapped by the County as High or Very High quality [County 2002]), the habitat on the southern portion of the site is considered a BRCA. The northern portion of the site is more heavily disturbed, and has fewer sensitive resources than the southern portion of the site. Because the northern portion of the site does contain soils capable of supporting sensitive species (Diablo clay) and supports San Diego fairy shrimp, Riverside fairy shrimp and two List B plant species, it is also considered a BRCA. Therefore, the whole site is considered a BRCA. Because the site is a BRCA, additional review and findings under MSCP would have to be made in order for the project to develop within a BRCA.

Additionally, the BMO typically requires a minimum of 80 percent avoidance of populations of County List A and B plant species (discussed above). Where impacts are allowed, in-kind preservation shall be required at a 1:1 to 3:1 ratio depending on the sensitivity of the species and population size, as determined in a biological analysis and approved by the DPLU Director. In order to provide greater overall conservation for the Quino and other MSCP covered species, however, the MSCP Amendment is proposed to maximize protection of Quino in the most defensible preserve configuration, and impacts to other sensitive species would be allowed to be mitigated as noted below. Additionally, the on-site impacts to List B species have been analyzed to determine whether 20 percent of the on-site population would be impacted by the proposed project.

The County also generally regulates natural resources (among other resources) via the RPO, the regulations of which address wetlands (as discussed above), sensitive habitats, and habitats containing sensitive animals or plants as sensitive biological resources. Per the County RPO, open space easements must be placed over steep slopes and development be precluded from floodways or floodplains, wetlands and sensitive habitat lands.

3.1.2 Guidelines for the Determination of Significance

The following guidelines are based on the Guidelines for Determining Significance and the Report and Content Requirements for Biological Resources, both approved by County of San Diego DPLU on September 26, 2006.

1. A block of habitat considered essential to the local or regional biological environment will be eliminated or substantially degraded such that it no longer provides the same function or value.

2. Individual or cumulative project-related improvements or activities within or adjacent to local corridors, regional linkages, or other areas utilized for wildlife movement will:

    a. Prevent wildlife from accessing areas considered necessary to their survival (i.e. foraging resources, breeding areas, etc.);
    b. Restrict wildlife from utilizing their natural movement paths (i.e. those paths used when given the choice absent human interference);
    c. Further constrain a narrow corridor by reducing width, removing available vegetative cover, creating edge effects, or placing barriers in the movement path; or

3. On- or off-site habitat will be subjected to substantial edge effects, including:

    a. Construction and post-construction noise levels in excess of 60 dB during daytime hours and 50 dB during nighttime hours;
    b. Artificial light in excess of 0.005-foot candles (half as bright as a full moon);
    c. A drawdown of the groundwater table of 3 feet or more (for groundwater-dependent species or habitat);
    d. Potential for encroachment of any kind, including but not limited to unauthorized clearing within preserved areas, trash dumping or off-road vehicle traffic;
    e. Predation of native species (e.g., by unrestrained domestic pets or a nest parasite);
    f. Water runoff or underground seepage causing a change in natural moisture levels and/or increasing the spread of pollution and pesticides; or

4. The natural biological diversity and habitat associations are not being preserved in a contiguous, functional block, thereby compromising the health and viability of the ecosystem.

5. Any of the following will occur to or within jurisdictional wetlands: removal of associated vegetation; grading; obstruction or diversion of water flow; change in velocity or siltation rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause a change in species composition, diversity, and abundance.

6. Any significant component of native or naturalized habitat will be removed through grading, clearing, or other construction activities.

7. The value of habitat will be "moderately to significantly" degraded either immediately or in the long-term as indicated by one of the following:

   a. A change in species composition, diversity, or abundance;
   b. A decline in the value or function of the habitat.

8. Direct, indirect, and/or cumulative impacts may occur that may be detrimental to the regional long-term survival of a County Sensitive animal or Group C or D plant species.

9. Direct, indirect, and/or cumulative impacts may reduce the local population of a plant species listed as federally or state endangered or threatened, and/or listed as a County Group A or B plant species, by more than 20 percent, or cause impacts that may be considered detrimental to the regional long-term survival of this species.

10. Direct, indirect, and/or cumulative impacts that may reduce the estimated local population of an animal species listed as federally or state endangered or threatened by more than 20 percent, or cause impacts that may be considered detrimental to the regional long-term survival of this species.

11. Grading, clearing, construction, or other activities (including passive and active recreation) will occur within 4,000 feet of an active golden eagle (*Aquila chrysaetos*) nest during the breeding season (January 1 to July 31).

12. Long-term or permanent development or active recreational uses will occur within 4,000 feet of an active golden eagle nest.

13. Grading, clearing, and/or construction will occur within the following distances and within the following time periods for one or more of these species:

Species	Distance	Breeding Season
Coastal cactus wren	300 feet from occupied habitat	February 15 to August 15
Coastal California gnatcatcher	300 feet from occupied habitat	February 15 to August 31
Least Bell's vireo	300 feet from occupied habitat	March 15 to September 15
Southwestern willow flycatcher	300 feet from occupied habitat	May 1 to September 1
Golden eagle	4,000 from active nest	January 1 to July 31
Burrowing owl	300 feet from active nest	February 15 to July 15
Tree-nesting raptors	500 feet from occupied habitat	February 15 to July 15
Ground-dwelling raptors	900 feet from occupied habitat	February 15 to July 15

14. Substantial raptor foraging habitat (e.g., native or non-native grasslands) would be removed.

15. The project does not conform to the requirements regarding wetlands, wetland buffers, or sensitive habitat lands as outlined in the RPO.

16. The project does not conform to the goals and requirements of the NCCP, or Section 7 of the Federal ESA.

17. The project does not conform to the goals and requirements as outlined in an applicable HCP, Habitat Management Plan (HMP), Special Area Management Plan (SAMP), or similar regional planning effort.

18. The project does not conform to the goals and requirements of applicable federal or state regulations, including but not limited to the federal ESA, MBTA, Bald and Golden Eagle Protection Act, Clean Water Act, Porter-Cologne Water Quality Act, and the California Fish and Game Code.

3.1.3 Analysis of Project Effects and Determination as to Significance

3.1.3.1 *Vegetation Communities (Guidelines 1, 6 and 7)*

Uplands

"Direct" impacts are immediate effects resulting from the permanent removal of habitat. The proposed project would cause direct impacts to vegetation communities both on and off site. The off-site impact footprint reflects grading for required public roads. Figure 3.1-3, *Impacts to Vegetation and Sensitive Resources,* provides a graphic representation of impacts to vegetation and sensitive resources on site and Figure 3.1-4, *Impacts to Jurisdictional Areas,* represents impacts to vegetation and sensitive resources in the off-site road and sewer improvement areas.

The proposed project (including off-site road improvements and Sewer Option A) would directly impact approximately 294.1 acres. Approximately 293.1 acres of impacts would be to upland vegetation communities on site, comprising approximately 0.1 acre of native grassland, 1.9 acres of Diegan coastal sage scrub (including 0.3 acre of disturbed), 263.1 acres of non-native grassland, 1.0 acre of eucalyptus woodland, 0.7 acre of agriculture, 20.6 acres of disturbed habitat, and 5.7 acres of developed land (Table 3.1-5). The habitat to be preserved on site if Sewer Option B-1 is implemented, off-site impacts would total 35.0 acres, including impacts to 0.1 acre of native grassland, 0.1 acre of Diegan coastal sage scrub, 23.5 acres of non-native grassland, 0.056 acre of vernal pools, 0.7 acre of agriculture, 5.8 acres of disturbed habitat (including 0.04 acre of road pool) and 4.7 acre of developed. If Sewer Option B-2 is implemented, off-site impacts would total 35.0 acres, including impacts to 0.1 acre of native grassland, 0.1 acre of Diegan coastal sage scrub, 22.9 acres of non-native grassland, 0.056 acre of vernal pools, 0.7 acre of agriculture, 5.4 acres of disturbed habitat (including 0.04 acre of road pool) and 5.7 acres of developed. Impacts to eucalyptus woodland, agricultural land, disturbed habitat, and developed areas would be considered less than significant. Impacts to Diegan coastal sage scrub, non-native grassland, native grassland, and vernal pools would be considered significant because they would meet Significance Guidelines 6 and 7 (**BI-1, BI-2, BI-3, and BI-4**, respectively). Guideline 1 would not be met, because, although the site supports significant resources, it is not considered essential to the local or regional biological environment.

3.1.3.2 *Jurisdictional Areas (Guidelines 5 and 15)*

Direct impacts to jurisdictional areas would result from project development both on and off site (Table 3.1-6). Approximately 0.20 acre of Corps non-wetland Waters of the U.S. would be

significantly impacted on and off site under Sewer Option A (while 0.21 acre would be impacted under Sewer Options B-1 and B-2). Impacts to CDFG jurisdictional areas would total 0.97 acre under Sewer Option A, including 0.73 acre of tamarisk scrub and 0.24 acre of streambed. As previously discussed in Section 3.1.1, an additional 0.24 acre of tamarisk scrub occurring on site was not considered jurisdictional as it does not occur along CDFG streambed. If either Sewer Option B-1 or B-2 is implemented, off site impacts to jurisdictional vernal pools would total 0.056 acre, and impacts to Waters of the U.S./CDFG streambed would total 0.012 acre. No impacts to County RPO wetlands are proposed; however, off-site improvements to Alta Road would occur within the wetland buffer of off-site mule fat scrub. No other project improvements would affect wetland buffers. Impacts associated with improvements to Alta Road are considered permitted uses within an RPO wetland under Section 86.604(a)(5) because Alta Road is a Circulation Element roadway. Nonetheless, proposed impacts to jurisdictional areas would be considered significant because Significance Guideline 5 would be met (**BI-5**). Significance Guideline 15 would not be met because the project impacts from Alta Road are an allowed use under RPO.

3.1.3.3 *Sensitive Plant Species (Guideline 9)*

The proposed project would directly impact four sensitive plant species: the San Diego barrel cactus and the San Diego marsh-elder, which are County Group B species; and the small-flowered morning glory and San Diego County viguiera, which are County Group D species. All of the Otay tarplant, variegated dudleya and California adolphia occur outside the limits of grading within proposed open space, and would not be impacted by development. A minimum 100-foot setback from development is provided for Otay tarplant and a 300-foot setback is provided for variegated dudleya from the open space boundary, as indicated in Figure 3.1-3.

Approximately 72 of the 193 (37 percent) San Diego barrel cacti and all of the approximately 138 marsh-elder plants on site lie within the impact boundaries. The BMO typically requires that impacts to Group B plant species must be avoided to the maximum extent practicable. However, as discussed in Subchapter 1.5, impacts resulting from circulation element roads are infeasible to avoid under the BMO. All of the impacts to San Diego marsh-elder are associated with the construction of Loop Road, which is a Circulation Element Road in the EOMSP. The location of Lone Star Road (formerly Loop Road) cannot be modified to avoid these impacts, because the northern terminus is already fixed, and the remainder of the alignment is constrained by the future alignment of State Route 11. Impacts to more than 20 percent of the on-site population of the County Group A or B species is generally considered significant by the County under Significance Guideline 9. Because greater than 20 percent of the on-site population of barrel cactus and marsh-elder would be impacted, these impacts would be considered significant under CEQA (**BI-6 and BI-7**). The project qualifies for an exception under the BMO for these impacts to Group B plant species. Refer to the discussion in Subchapter 1.5 of this report and the EIR Appendix (E) for detailed discussion on the BMO exception.

If Sewer Option B-1 or B-2 is implemented, impacts would result to five San Diego button-celery (*Eryngium aristulatum* var. *parishii*) associated with the off-site vernal pool impacts. These impacts would be considered significant because Guideline 9 would be met (**BI-8**).

The project would impact all 15 of the small-flowered morning glory individuals, a County Group D species observed on site. Although direct impacts to this species are considered potentially significant, avoidance of small-flowered morning glory is not considered feasible due to its location and distribution in the central portion of the site. Because the site does not support a critical population of

this species and the small number of individuals impacted would not threaten the long-term survival of the species in the region, combined with the low sensitivity rating of the species, these impacts are considered less than significant.

The project would impact approximately 44 of the 252 San Diego County viguiera individuals (17 percent) observed on site. The project would place approximately 83 percent of the on-site population of this species into on-site open space. The preserved individuals would be located in the most biologically sensitive areas of the site. Because this species has a low sensitivity rating and would be adequately preserved on site, these impacts are not considered significant.

3.1.3.4 *Sensitive Animal Species (Guidelines 8, 10, 11, 12, 13 and 14)*

Twenty-four of the 31 road pools mapped on site (and four mapped off site) would be directly impacted by the proposed development. None of the impacted road pools support vernal pool indicator species and only one supports San Diego fairy shrimp and Riverside fairy shrimp. Impacts to those road pools not supporting fairy shrimp would not be considered significant. The road pool supporting San Diego fairy shrimp, totaling 116 sf, would be impacted by the proposed project. If Sewer Option B-1 or B-2 is implemented, impacts would result to San Diego fairy shrimp associated with the off-site vernal pools discussed under Subchapter 3.1.3.1, *Vegetation Communities*. Impacts to one of the two road pools supporting San Diego fairy shrimp and Riverside fairy shrimp would be considered significant because Significance Guidelines 8 and 10 would be met (**BI-9**).

The proposed project would directly impact all or portions of the territories of four burrowing owl pairs. The locations of four nesting pairs of burrowing owls and one individual in the southeastern corner of the site would be preserved in open space. The County MSCP (1997) requires establishment of a 300-foot impact avoidance area around all occupied burrows, which has been incorporated into the design of the on-site open space. The remaining locations of four pairs of burrowing owls would be impacted by the project. If Sewer Option B-1 or B-2 is implemented, impacts would result to one additional burrowing owl pair by both Sewer Options B-1 and B-2. Impacts to four or five burrowing owl pairs would be considered significant because Significance Guideline 10 would be met (**BI-10**).

The federally listed endangered Quino was identified on site in 2000; however, it was not detected on site during protocol surveys in 2005 or 2006. Two of the three locations where the Quino was observed during 2000 would be impacted by the project. The ability to detect this species varies from year to year, so it is assumed that portions of the impacted habitat on site are occupied by the Quino. If Sewer Option B-1 or B-2 is implemented, impacts would result to one additional Quino location by both Sewer Options B-1 and B-2. Impacts to the Quino would be considered significant because Significance Guideline 10 would be met (**BI-11**).

Although none was observed on site, a golden eagle pair is known to nest in O'Neal Canyon, several miles off site to the northeast, and so is relevant under Significance Guidelines 11, 12, 13 and 14. The project site lies within the pair's foraging area. Because this species generally nests in rugged areas far from human activity, it is not expected to nest any nearer to the project site than O'Neal Canyon; thus, the project would only impact golden eagle foraging habitat; no direct take of a golden eagle would occur. The project site represents slightly more than 1.0 to 2.5 percent of the golden eagle territory. Substantial foraging habitat would remain on Otay Mesa and in the adjacent foothills, providing ample foraging habitat for the golden eagle. Because no project activities are proposed within 4,000 feet of an active nest and a substantial amount of the territory would be avoided by the

proposed project, Significance Guidelines 11, 12, 13 and 14 would not be met; therefore, this impact would be considered less than significant.

The project would also significantly impact habitat occupied by the coastal western whiptail, California horned lark, loggerhead shrike, grasshopper sparrow, and northern harrier which are MSCP covered species. Additionally, impacts would occur to white-tailed kite foraging habitat. The white-tailed kite is a State Fully Protected Species. A majority of the site could be used for raptor foraging, including all of the grassland, Diegan coastal sage scrub and disturbed areas that would be impacted by the project. These impacts are considered significant because Significance Guidelines 13 and 14 would be met (**BI-12**).

3.1.3.5 *Wildlife Corridors and Regional Context (Guidelines 2 and 4)*

As noted above, the site forms the southwestern corner of a large contiguous block of habitat that extends east onto Otay Mountain and beyond. While the site does function as a BRCA, the project site does not support any local or regional corridors or linkages. Mexico abuts the property's southern border, and existing development abuts the northern and northwestern property boundary. Because of the lack of significant topography, wildlife movement would be randomly dispersed across the site, rather than along any local or regional movement corridor. The project site does not support any riparian corridors that might be used for wildlife movement, nor does it connect to any such corridors off site. No impacts would result to wildlife corridors and Guideline 2 would therefore not be met.

The southern portion of the site has been conserved in a configuration that is contiguous with undeveloped lands to the east in a block of functional habitat. As a result, Guideline 4 would therefore not be met.

3.1.3.6 *Indirect Impacts (Guidelines 1, 3, 7 and 13)*

Potential indirect impacts from project construction include fugitive dust, noise, animal behavioral changes, and errant construction impacts, as well as edge effects, including decreased water quality (through sedimentation, urban contaminants, or fuel release for example), colonization of non-native plant species, human activity, nuisance animal species, and night-time lighting, as described below.

Fugitive Dust

Fugitive dust produced by construction could disperse onto native vegetation. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This in turn could affect animals dependent on these plants (e.g., seed-eating rodents). Fugitive dust also may make plants unsuitable as habitat for insects and birds.

Impacts associated with fugitive dust are assessed in the air quality technical report as human respiratory irritants rather than as threats to plant or animal species. As part of project grading operations, active construction areas and unpaved surfaces would be regularly watered pursuant to County Grading Ordinance and permit requirements to ensure that generation of fugitive dust would be minimized and the adjacent habitat value and function would be preserved. Therefore, Significance Guideline 7 would not be met, and impacts to plant or animal species due to fugitive dust would be considered less than significant.

Construction Noise

Noise from such sources as grading, grubbing, and vehicular traffic would be an impact to local wildlife. Noise-related impacts would be considered significant if sensitive species (such as coastal California gnatcatchers or raptors) were displaced from their nests and failed to breed. Birds and other species may be temporarily displaced from the vicinity of the project areas. The least Bell's vireo and southwestern willow flycatcher have no potential to occur on site. Because grading or construction would occur within 300 feet of nesting coastal California gnatcatchers, within 500 feet of tree-nesting raptors, or within 900 feet of ground-nesting raptors (i.e. northern harriers) and construction equipment has the potential to exceed 60 dB Leq in the coastal sage scrub habitat adjacent to Lots 16 through 18 and Lots 24 as discussed in Subchapter 3.5.3.1, *Construction Noise Impacts*, Significance Guidelines 3a and 13 would be met and effects due to construction activities and noise would be significant (**BI-13**).

Operational Noise

Noise generated by future industrial development on Lots 16, 17, 18 and 24 has the potential to exceed 60 dB during daytime hours and 50 dB during nighttime hours in the sensitive habitat located on those lots. According to calculations conducted by Kimley-Horn and Associates (2009), sound levels from typical industrial operations could range from 57.5 dB to 60 dB L_{eq} at the property line but could be as high as 70 dB anytime (see discussion in Subchapter 3.5.2.3, *Operational Noise Impacts*. Because Diegan coastal sage scrub would be preserved in on-site open space lots adjacent to the industrial property lines, operational noise could interfere with breeding bird activity within the on-site open space and Guideline 3a would be met. Operational noise effects would be significant. (**BI-14**)

Animal Behavioral Changes

Breeding birds and mammals may temporarily or permanently leave their nests and territories to avoid construction activity, which could reduce reproductive success and increase mortality. The project site supports burrowing owls and has potential to support coastal California gnatcatchers (although none were detected during protocol surveys in 2000 or in any subsequent survey) and tree- and ground-nesting raptors. Therefore, it has potential to cause indirect impacts to these species if any of the following occur:

- Construction activity within 500 feet of an active tree-dwelling raptor nest;
- Construction within 300 feet of an active burrowing owl burrow;
- Construction within 300 feet of a gnatcatcher nest; or
- Construction within 900 feet of a ground-dwelling raptor nest.

Because the project has the potential to meet one of the above conditions, Significance Guideline 13 would be met, and the impact would be considered significant (**BI-15**).

Errant Construction Impacts

Errant grading or clearing beyond the proposed construction limits could impact sensitive vegetation communities or species intended for preservation. Prior to construction, orange construction fencing would be installed within the proposed limits of impact to clearly define the grading boundaries and

biological monitoring would be conducted of on-site open space during grading and construction to prevent unintended impacts. As a result, potentially significant errant construction impacts would not be expected.

Water Quality

Water quality in riparian areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (fuels, oils, and/or lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. The proposed project would avoid potential water quality impacts through compliance with the County Grading Ordinance and implementation of the proposed BMPs outlined in the Stormwater Management Plan (Appendix J). Thus, surface water quality would not be degraded by the proposed project and less than significant impacts would arise.

Non-native Plant Species

Non-native plants could colonize sites disturbed by construction and could potentially spread into adjacent native habitats, especially following a disturbance such as fire. Many of these non-native plants are highly invasive and can displace native vegetation and reduce native species diversity, potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife that is dependent on the native plant species, as a few examples. Colonization of non-native plant species in non-impact areas and the resulting degradation of native habitats would be significant, should it occur as a result of the proposed project. Because project landscaping would not include any California Invasive Plant Council (Cal-IPC) List A species, Significance Guidelines 1, 3e, and 7 would not be met, and impacts due to invasive, non-native plants would be considered less than significant.

Nuisance Animals

Nuisance animal species, particularly domestic cats, are known to impact native wildlife. However, because the project is an industrial development, no nuisance animal species are anticipated. Therefore, Significance Guideline 3e would not be met, and no impacts would occur due to nuisance animal species.

Human Activity

Increases in human activity in the area could result in degradation of sensitive vegetation through habitat fragmentation, formation of additional edges through unauthorized road or trail creation, removal of existing vegetation, or illegal dumping. Since the proposed project is an industrial project the likelihood of new trails being created in open space and increased human activity would be low. Therefore, Significance Guideline 3 would not be met, and impacts would be considered less than significant.

Night Lighting

Night lighting may expose wildlife species to an unnatural light regime and alter their behavior patterns, and may result in a loss of species diversity. All construction and security lighting associated

with the project would be shielded or directed away from the open space. As a result, Significance Guideline 3b would not be met, and impacts due to night lighting would be less than significant.

Groundwater Drawdown

No groundwater pumping is proposed by the project. As a result, Guideline 3c would not be met and no impacts would occur due to groundwater drawdown.

3.1.3.7 *Local, State and Federal Regulations (Guidelines 17 and 18)*

The project would impact sensitive vegetation communities, sensitive species and areas considered jurisdictional by the Corps, CDFG and RWQCB through direct loss and could cause significant indirect impacts to them as well. Wetland permits would be obtained and mitigation is proposed within the context of the BMO, MSCP, Sections 7 and 10 of the federal ESA, MBTA, Bald Eagle Protection Act, Sections 404 and 401 of the federal Clean Water Act, Porter-Cologne Water Quality Act, and California Fish and Game Code. This, combined with on-site avoidance of sensitive resources and off-site habitat preservation, would ensure conformance to the applicable goals and requirements. As a result, Guidelines 17 and 18 would not be met; therefore, no impacts would occur with regard to regulatory compliance.

3.1.4 Cumulative Impact Analysis

When considered alone, the environmental effects of a single development project may be less than significant, but when considered in the context of past, present, and future development, additive project effects may cause the significant loss or degradation of a resource.

The cumulative impact analysis for the proposed project includes a study area defined by land use and political boundaries, species ranges, vegetation communities, site conditions, and topography. When assessing cumulative impacts to biological resources, the geographic area included in the cumulative analysis should reflect: (1) biological parameters similar to those occurring on the project site or within the same watershed area; (2) distribution of sensitive species populations and home ranges similar to those occurring on the project site; and (3) habitat use patterns of common wildlife species similar to those occurring on the project site. For this project, the cumulative impact study area is defined by those portions of Otay Mesa within the County (i.e., EOMSP area), an area extending from the lower hills of Otay Mountain in the east, the Otay River Valley in the north, the City/County boundary in the west, and the U.S.-Mexico International Border in the south.

The prior Program EIR for the EOMSP acknowledged that cumulatively significant biological impacts would arise upon buildout of the Specific Plan. It further noted that participation in a regionally coordinated conservation effort, such as the MSCP, would reduce cumulative impacts to sensitive species and habitats to below a level of significance. As noted above, the County and City MSCP Subarea Plans (and related implementing ordinances) were adopted since the EOMSP Program EIR was certified. Properties in the EOMSP are contained in the South County Segment of the County MSCP, but hardlines were not adopted at the time of MSCP was approved. As such, individual projects proposed in the EOMSP must process amendments to the County MSCP to obtain approvals for take of listed species and associated habitat loss. According to the 2008 MSCP Annual Report, the South County segment has experienced 38,379 acres of preserved habitat and 576 acres of cumulative loss since the inception of the MSCP (County 2009b). As discussed below, projects within the

cumulative study area further contribute to the preservation and losses within the South County segment of the MSCP and their compliance with the MSCP Subarea Plan requirements. Similarly, projects within the City of San Diego must comply with the City's MSCP Subarea Plan requirements. In both jurisdictions, all projects would be required to conform to existing regulations with respect to avoidance, minimization and mitigation of impacts to sensitive habitat achieving no net loss of impacts to wetlands and like/kind replacement for impacts to sensitive habitat that cannot be avoided. Therefore, it is assumed that during the project review and approval process for these projects, the impacts to important biological resources would be mitigated at accepted ratios.

Sixty-three projects (including the proposed project) were reviewed for this cumulative analysis (Table 3.1-7). As noted in the table, 20 of the 63 cumulative projects would result in significant or potentially significant impacts to biological resources. No quantified biological impacts are available for 42 of the related projects in the study area. The focus of this cumulative evaluation is on non-native grassland impacts and the sensitive species that inhabit or depend upon it, as these are the predominant resources in the Otay Mesa area of the South County Segment of the MSCP and the primary sensitive habitat impacted by the proposed project. Additionally, impacts to non-native grassland would affect territories for numerous burrowing owls among other sensitive species, like the Quino. Sensitive plant species, such as barrel cactus, would also be impacted through grassland and coastal sage scrub removal.

Approximately 1,205 acres of grasslands would be impacted within the cumulative study area (Table 3.1-7). Total impacts to coastal sage scrub would be small (i.e., less than 15 acres) over all of Otay Mesa because the area has historically contained a very limited amount of coastal sage scrub due to a long history of farming in this region. Coastal sage scrub is predominantly located on steeper slopes at the eastern edge of the Specific Plan area. The project site and vast majority of cumulative projects are located on the mesa in predominantly non-native grassland habitat. Therefore, cumulative impacts to coastal sage scrub would be less than significant. Impacts to grasslands within the cumulative study area would be larger and be considered a potentially significant cumulative loss of habitat, of which the proposed project's contribution would be considerable (22 percent of the total projected cumulative loss). Impacts to grassland also contribute to cumulative impacts to sensitive species dependant on the grassland for foraging habitat, such as burrowing owls and other raptors. In unincorporated East Otay Mesa, impacts to non-native grassland occupied by burrowing owls and/or their territories are typically offset by a 1:1 preservation ratio, while unoccupied habitat can be mitigated at a 0.5:1 ratio. As such cumulative impacts to grasslands and burrowing owls would, be mitigated to less than significant levels through preservation of approximately 857 acres in accordance with the BMO, the EOMSP Final EIR and City of San Diego Environmentally Sensitive Lands (ESL) Regulations. Compliance with the BMO would also generally result in the conservation of 80 percent of sensitive plant locations in the cumulative study area, unless an exception is appropriate (as in the case for the proposed project).

The County of San Diego, in coordination with the USFWS and the CDFG, is preparing a minor amendment to the MSCP for the project's impacts. The MSCP is a regional habitat conservation program for sensitive habitats and species. Compliance with the Otay Mesa MSCP Subarea Plan Minor Amendment would ensure that significant resources would be adequately preserved in permanent open space and that all projects would be in conformance with that plan. An assemblage of corridors, open space linkages and habitat preservation systems would need to be put in place as these projects are reviewed and approved. In the case of Otay Mesa, the project applicant and others have purchased mitigation lands on the Lonestar Ridge parcel northeast of Brown Field (Figure 3.1-5). Enhancements of the open space would also be implemented as mitigation for sensitive species, such as

vernal pool restoration, burrowing owl burrows and barrel cactus relocation. This open space would provide an assemblage of habitats and species that would enhance the amount of conservation in the South County segment of the MSCP.

In conclusion, the proposed project would contribute to the regional cumulative loss of sensitive non-native grassland habitat, but is also designed to fully mitigate non-native grassland and Diegan coastal sage scrub impacts by permanently preserving 263.1 acres of owl occupied non-native grassland would be preserved on and off site and 2.9 acres of Diegan coastal sage scrub on site. In addition, 300-foot buffers around known owl locations are provided in the project design to further lessen direct impacts. Once the project's MSCP amendment is approved, the project would be included in the regional habitat conservation plan, which further ensures that cumulative impacts to the south county region have been adequately analyzed and mitigated **(BI-16)**.

3.1.5 Mitigation Measures Proposed to Minimize the Significant Effects

The proposed project would impact sensitive vegetation communities and species significantly through direct loss and could cause significant indirect impacts to them as well. Mitigation is proposed in accordance with the BMO, assuming the project site is considered a BRCA (see Tables 3.1-8 and 3.1-9) although as noted above, an Exception to the BMO has been requested for impacts to County Group B plant species. Mitigation measures identified in the EOMSP FEIR are also referenced, where appropriate. In general, Mitigation Measures 3B through 3L are identified as "general guidelines for vegetation/habitat mitigation." Previous mitigation measures 3F and 3G are not applicable to the proposed project since they pertain to resources not present on the Otay Crossings Commerce Park site.

Previous mitigation measure 3B called for on-site preservation of sensitive habitats as a first priority, and off-site mitigation as a second priority. Proposed project mitigation measures BM-1 through BM-5 describe both the on- and off-site mitigation requirements for the project's impacts to sensitive habitats.

Previous mitigation measure 3C called for on- or off-site preservation or revegetation to be within or adjacent to the impact area and contiguous with large open space areas. The proposed on-site open space areas are adjacent to open, undeveloped land to the east of the project site, and off-site mitigation areas are located on parcels providing large blocks of habitat.

Previous mitigation measure 3D required that habitat restoration be located in ecologically appropriate areas. Proposed mitigation measures BM-4 through BM-8 contain specific restoration requirements, which would mostly occur on the Lonestar Ridge in the northern portion of the EOMSP area, a location approved by the Wildlife Agencies.

Previous mitigation measure 3E required protection of the majority of coastal sage scrub on site through participation in the NCCP and any impacts to be appropriately mitigated. The project would impact 1.8 of 8.7 acres of coastal sage scrub that exists on site and 0.1 acres off site. The remaining coastal sage scrub would be preserved in the proposed on-site open space areas at a mitigation ratio that exceeds 1.5:1, which meets BMO and MSCP requirements, as part of proposed mitigation measure BM-1.

Previous mitigation measure 3H required the on-site preservation of the majority of vernal pools or if that was not viable, the preservation of off-site vernal pools under threat of development. Proposed mitigation measure BM-9 addresses impacts to road pools and vernal pools if sewer options B-1 or B-2 are implemented.

Previous mitigation measure 3I required that impacts to sensitive plant species be mitigated through on-site preservation as a first priority and off-site preservation when no other feasible alternatives to on-site preservation exist. Proposed mitigation measures BM-6 through BM-8 address impacts to San Diego barrel cactus, San Diego marsh elder, and San Diego button celery through a combination of on- and off-site mitigation. The project would also preserve 83 percent of on-site San Diego County viguiera in proposed on-site open space as part of mitigation measures BM-1 and BM-2.

Previous mitigation measure 3J required that impacts to on-site sensitive animal species be mitigated by avoidance as a first priority, and through restoration/creation of appropriate habitat. Proposed mitigation measures BM-9 through BM-12 address impacts to sensitive animal species through both on- and off-site mitigation.

Previous mitigation measure 3K required the incorporation and preservation of drainage buffers and the preservation of connective wildlife corridors. Proposed mitigation measure BM-5 addresses the impact to jurisdictional tamarisk scrub and non-wetland waters of the U.S. and CDFG streambeds through creation of these habitats in proposed on-site open space. The project site does not support any local of regional corridors or linkages.

Previous mitigation measure 3L required that heavy equipment and construction activities be restricted to the development area. Prior to approval of grading plans, orange construction fencing would be required to be placed at the limits of the development/impact area to prevent any incursions into the on-site open space as part of proposed mitigation measure BM-1 and biological resources environmental design measures.

All avoided habitat (i.e., not including grading or brush management areas) on site as well as at off-site mitigation locations would be preserved in one or more open space easements. Figure 3.1-5, *Off-site Mitigation Parcels*, illustrates the locations for off-site habitat acquisition. Impacts associated with off-site road and sewer improvements are assumed based on the current status of these areas. If any of these features are required to be built by other projects and are constructed prior to the proposed project needing to construct those facilities, mitigation proposed below for off-site improvements shall not be required of the proposed project. The on-site open space easement along the southern boundary lies within the proposed footprint for the future ROW for SR-11 and the future POE. Upon transfer of the property to the state of California or the federal government, the open space easement would be extinguished only after the impacts to the preserved biological resources have been mitigated.

With implementation of the following mitigation measures, significant impacts to sensitive biological resources would be reduced to less than significant levels. Although the project is not required to comply with the BMO because of the exception allowed under Section 86.509(b), and would not conform to the BMO in terms of allowable impacts, adequate mitigation for impacts to sensitive plant species would be provided.

Upland Vegetation Communities

BM-1 Direct impacts to 1.9 acres of Diegan coastal sage scrub (including disturbed) shall be mitigated at a 1.5:1 ratio, for a total mitigation requirement of 2.9 acres. This mitigation shall be accomplished through the on-site preservation of 2.9 acres of coastal sage scrub. Because a total of 6.8 acres of Diegan coastal sage scrub would be available for mitigation, the

remainder (3.9 acres) would be applied to the mitigation requirement of non-native grassland as described in BM-2. Prior to the on-set of grading, an RMP shall be prepared for both on-site and off-site open space and shall specify all stewardship measures, such as upkeep of fencing and signs, restricting trespassing, and removing debris, required to maintain habitat quality for preserved resources. A Property Analysis Record (PAR) and cost estimate will be prepared for long-term management of on-site and off-site open space and incorporated into the RMP. The RMP shall be prepared to the satisfaction of the USFWS, CDFG and County.

BM-2 Direct impacts to 263.1 acres of non-native grassland shall be mitigated at a 1:1 ratio, for a total mitigation requirement of 263.1 acres. Impacts to 263.1 acres of non-native grassland shall be partially offset with on-site preservation of 34.4 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland, and the remaining 3.9 acres of Diegan coastal sage scrub, for a total of 44.7 acres. Additional non-native grassland mitigation shall occur through off-site habitat preservation of five parcels totaling 206 acres, consisting of: 1) the 69-acre O'Neal Canyon parcel; 2) the 15-acre O'Neal Canyon parcel; 3) a 62-acre parcel at the Lonestar Ridge site; 4) 20 acres of a 40-acre parcel at the Lonestar Ridge site; and 5) 40 acres of the 63-acre Martz parcel in Ramona (as illustrated in Figure 3.1-5 and Figure 9 of Appendix F). The remaining 12.4 acres of mitigation shall be met through preservation of 9.2 acres of the Otay Business Park (Paragon) open space parcel on the Lonestar Ridge site and 3.2 acres at the Martz parcel in Ramona. If the Otay Crossings project goes forward concurrently with the Paragon project, the mitigation requirements will be revised based on Appendix D of the project Biological Technical Report.

Impacts to the additional 4.5 acres of non-native grassland associated with Sewer Option B-1 shall be mitigated through preservation of 4.5 additional acres of the Paragon portion of the northern Lonestar Ridge parcel.

Impacts to the additional 3.9 acres of non-native grassland associated with Sewer Option B-2 shall be mitigated through preservation of 3.9 additional acres of the Paragon portion of the northern Lonestar Ridge parcel.

The RMP referenced in BM-1 shall also include management of both on- and off-site non-native grassland mitigation lands described herein.

BM-3 Direct impacts to 0.1 acre of native grassland shall be mitigated at a 2:1 ratio, for a total mitigation requirement of 0.2 acre. This mitigation shall be accomplished through acquisition and management of land on the Lonestar Ridge parcels, of which 0.2 acre would be for impacts to native grassland. The RMP shall include management of off-site native grassland mitigation lands as noted in BM-1.

BM-4 If Sewer Option B-1 or B-2 is implemented, impacts to 0.056 acre of vernal pools would be mitigated by restoration of vernal pool habitat on the southern off-site Lonestar Ridge parcel at a 3:1 ratio, resulting in restoration of 0.168 acre of vernal pool surface area. The restoration plan should include San Diego button-celery in the seed mix and success criteria. A restoration plan shall be prepared and submitted for approval to the County and Wildlife Agencies prior to initiating impacts.

Wetland Vegetation Communities/Jurisdictional Areas

BM-5 Impacts to jurisdictional tamarisk scrub shall be mitigated at a 1:1 mitigation ratio through creation of 0.73 acre of riparian or mule fat scrub habitat. Impacts to jurisdictional non-wetland Waters of the U.S./CDFG streambeds shall be at a 1:1 mitigation ratio. This shall require creation of 0.24 acre of drainages, of which 0.20 acre must be Corps jurisdictional. All wetland mitigation shall occur on site within the open space along existing on-site drainages. Mitigation shall consist of realigning and widening portions of existing non-wetland Waters of the U.S./CDFG streambeds within the impact footprint and seeding/planting with a mix of native grasses and forbs as well as riparian shrubs such as mule fat and San Diego marsh-elder. The widening of the drainages shall satisfy the creation component of the mitigation, and seeding/planting shall partially satisfy the enhancement/restoration component. Additional enhancement/restoration shall occur along the drainage in the open space in the southeastern corner of the site. A wetland restoration plan shall be prepared and implemented to the satisfaction of the Corps, CDFG, and County.

If Sewer Option B-1 or B-2 is implemented, impacts to 0.012 acre of unvegetated Waters of the U.S./streambed will be mitigated by creation of vernal pool habitat at the southern off-site Lonestar Ridge parcel at a 1:1 ratio.

Sensitive Plants

Table 3.1-10 summarizes impacts and mitigation to sensitive plant and animal species.

BM-6 Direct impacts to 72 San Diego barrel cacti shall be mitigated at a 2:1 ratio through acquisition of habitat supporting a minimum of 144 barrel cacti. This mitigation may be met within lands acquired for mitigation of impacts to grassland and burrowing owls described above in BM-2. Although the project would impact approximately 37 percent of the on-site barrel cactus population, which is not consistent with the 20 percent impact threshold contained in the BMO, these impacts would be offset through mitigation. Mitigation shall consist of acquisition of off-site lands (i.e., O'Neal Canyon and Lonestar Ridge parcels as shown in Figure 3.1-5) which support barrel cactus populations. Mitigation would also consist of salvage of the 72 barrel cacti within the project footprint and relocation of these individuals to areas of appropriate habitat within the on-site open space easements. An On-site Grassland and San Diego Barrel Cactus Mitigation Plan shall be prepared by the applicant, and approved by the County prior to initiating impacts. Translocation of the barrel cacti shall occur prior to initiating impacts consistent with the On-site Grassland and San Diego Barrel Cactus Mitigation Plan. The RMP noted in BM-1 shall include measures to protect and enhance the preserved and relocated populations of San Diego barrel cactus.

BM-7 Direct impacts to 138 San Diego marsh-elder individuals shall be mitigated at a 2:1 ratio through acquisition of habitat supporting at least 276 individuals in Marron Valley Mitigation Bank or through restoration of a minimum of 276 individuals within the off-site mitigation location for Corps and CDFG WUS/streambed as determined through the permitting process.

BM-8 If Sewer Option B-1 or B-2 is implemented, impacts to San Diego button-celery would be mitigated by restoration of vernal pool habitat on the southern off-site Lonestar Ridge parcel at a 3:1 ratio, resulting in restoration of 0.168 acre of vernal pool surface area. The restoration

plan should include San Diego button-celery in the seed mix and success criteria. A San Diego button-celery restoration plan would be prepared and submitted for approval to the County and Wildlife Agencies prior to initiating impacts.

Sensitive Animals

BM-9 Direct impacts to 116 s.f. of road pool occupied by San Diego and Riverside fairy shrimp would be mitigated by creating 232 s.f. (2:1 ratio) of pool habitat that supports these species. Although it would not be a requirement to create vernal pools, vernal pool plant species should be incorporated into a basin restoration effort. The basin restoration effort would occur in the off-site open space proposed for the southeastern portion of the site on the southern Lonestar Ridge parcel. A basin restoration plan shall be prepared and implemented to the satisfaction of the USFWS and County that would modify the micro-topography of the site to provide for appropriate hydrology for pools and associated species. The basin restoration plan shall include restoration of appropriate habitat and hydrology and provide for propagation of San Diego and Riverside fairy shrimp. Management and monitoring specified in the basin restoration plan shall ensure that appropriate success criteria are met.

If Sewer Option B-1 or B-2 is implemented, impacts to 0.056 acre of vernal pools occupied by San Diego fairy shrimp would be mitigated by creating 0.168 acre (3:1 ratio) of vernal pool habitat that supports these species. The basin restoration effort would occur in the off-site open space proposed for the southeastern portion of the site on the southern Lonestar Ridge parcel. A vernal pool restoration plan shall be prepared and implemented to the satisfaction of the USFWS and County that would modify the micro-topography of the site to provide for appropriate hydrology for pools and associated species. The basin restoration plan shall include restoration of appropriate habitat and hydrology and provide for propagation of San Diego fairy shrimp. Management and monitoring specified in the basin restoration plan shall ensure that appropriate success criteria are met.

BM-10 Direct impacts to occupied burrowing owl habitat shall be mitigated at a 1:1 ratio with preservation of 263.1 acres of occupied burrowing owl habitat or habitat capable of supporting the burrowing owl. This mitigation would be met by the 44.7 acres of on-site preservation through an open space easement in Lots 57 through 59 and the off-site acquisition of 218.1 acres of occupied burrowing owl habitat or habitat capable of supporting the burrowing owl. The off-site acquisition parcels are identified as non-native grassland mitigation under BM-2 and detailed in the Biological Technical Report for the proposed project. If grading would occur during the burrowing owl breeding season (February 15 through August 31), a pre-construction survey of the known active burrows shall be conducted to avoid filling burrows or injuring the owls by burrow collapse. The survey shall take place 3 to 5 days prior to initiation of construction. Weed removal (by whacking, bush hogging, or mowing) shall be conducted, if necessary, to make all potential burrows in the relevant impact area more easily observed. This weed removal shall be monitored by a qualified biologist to ensure that burrows are not disturbed during the process. Cameras should be used to ensure that burrows are unoccupied by burrowing owls. If owls are present in the burrows during the breeding season, passive relocation or eviction shall not be allowed. No grading will occur during the breeding season for the burrowing owl without concurrence by the Wildlife Agencies that owls will not be affected by construction activities. If owls are present outside of the breeding season, passive relocation with the use of one-way doors would

be implemented by a qualified biologist in accordance with the CDFG Staff Report on Burrowing Owl Mitigation. Once it is believed that the owls have vacated the burrows (this should take approximately 48 hours after installation of one-way doors), all burrows shall be carefully excavated (to confirm they are empty) and then filled to prevent occupation or reoccupation. The excavation and filling shall also be carried out by a qualified biologist. The Wildlife Agencies shall review and approve any passive relocation or eviction plans prior to implementation. Construction materials (e.g. pipes, rubble piles, etc.) shall be closed off to prevent burrowing owls from reoccupying the site.

If Sewer Option B-1 or B-2 is selected, impacts to the additional 3.0 acres of non-native grassland supporting burrowing owls will be mitigated through preservation of 1.5 additional acres at the Paragon portion of the Lonestar Ridge site and 1.5 acres at the Martz parcel.

BM-11 Direct impacts to the Quino shall be mitigated through on- and off-site preservation of occupied habitat as part of the mitigation for impacts to vegetation communities described above under BM-1 and BM-2. A total of seven Quino-occupied locations shall be included in the preserved habitat. On-site preservation shall conserve one previously recorded Quino location. The County is currently undergoing an MSCP amendment process with the USFWS to gain Quino take authorization for the entire County MSCP Subarea. The proposed MSCP amendment is distinct from the proposed project's MSCP Amendments. If the County's Quino amendment to the MSCP is processed before implementation of the proposed project, the project would be covered by the County's Quino take authority, but this cannot be assumed, so it is expected that the project would have to process an individual take authority for impacts to Quino, via a Section 7 consultation.

If Sewer Option B-1 or B-2 is selected, impacts to the additional 3.0 acres of non-native grassland supporting Quino will be mitigated through preservation of 1.5 acres of the Paragon open space parcel on Lonestar Ridge site and 1.5 acres at the Martz parcel.

Other Sensitive Species

BM-12 Direct impacts to the coastal western whiptail, California horned lark, northern harrier and raptor foraging habitat shall be mitigated through coastal sage scrub and grassland mitigation requirements outlined in BM-1 through BM-3. Potential direct impacts to bird species covered under the MBTA, including State Fully Protected Species (golden eagle and white-tailed kite), shall be avoided by restricting brushing and grading to outside of the breeding season of most bird species (general breeding season is February 15 to September 15). Grubbing, grading, or clearing during the breeding season of MBTA covered species could occur if it is determined via a pre-construction survey that no nesting birds (or birds displaying breeding or nesting behavior) are present immediately prior to grubbing, grading, or clearing and would require approval of the USFWS, CDFG, and County that no breeding or nesting avian species are present in the vicinity of the grubbing, grading, or clearing.

Construction Noise

BM-13 All brushing, grading, and clearing of vegetation shall take place outside of the bird-breeding season (February 15 through August 31). If construction activities are proposed to occur during the breeding season within 300 feet of burrowing owl burrows or gnatcatcher nest,

within 500 feet for tree-dwelling raptor nests, or within 900 feet of ground dwelling raptor nests, a pre-construction survey shall be conducted to determine if nesting birds (or birds displaying breeding or nesting behavior) are present. No construction activities shall occur within 300 feet of burrowing owl burrows or gnatcatcher nests, or within 500 feet of tree-dwelling raptor nests, or within 900 feet of ground-dwelling raptor nests. No construction activities shall occur within those distances until a qualified biologist determines that they are no longer active or it is determined that noise levels would not exceed 60 dBA L_{eq} at the nest site. Alternatively, noise minimization measures developed by a County-certified noise consultant (such as noise barriers) could be constructed to bring noise levels to below 60 dBA L_{eq}.

Operational Noise

BM-14 A Noise Protection Easement shall be dedicated and enforced on Lots 16 through 18 and 24. The Noise Protection Easement shall require future noise analysis within subsequent discretionary permits for the lots to ensure that noise levels would not exceed an hourly 60 dBA L_{eq} during the daytime and 50 dBA L_{eq} during the nighttime. Noise protection measures that could be integrated into future industrial site plans could include proper building orientation, selection of quieter equipment, or placement of noise-producing equipment behind buffer zones, noise enclosures or parapet walls.

Animal Behavioral Changes

BM-15 Impacts to animal behavior would be mitigated through implementation of **BM-13**.

Cumulative Impacts

BM-16 The project's contribution to cumulative impacts to non-native grassland and burrowing owl habitat would be mitigated through implementation of **BM-2**.

3.1.6 Conclusion

Implementation of the proposed project (including proposed off-site impacts under Sewer Option A) would cause direct, significant impacts to upland vegetation communities: 1.9 acres of Diegan coastal sage scrub (including 0.1 acre off site), 263.1 acres of non-native grassland (including 19.0 acres off site), and 0.1 acre of off-site native grassland. These impacts will be mitigated at 1.5:1, 1:1, and 2:1 ratios, respectively, through a combination of on- and off-site habitat preservation, as described for mitigation measures **BM-1** through **BM-3**, above. If Sewer Option B-1 is implemented, an additional 4.5 acres of non-native grassland and 0.056 acre of vernal pools would be impacted, and if Sewer Option B-2 is implemented, an additional 3.9 acres of non-native grassland and 0.056 acre of vernal pools would be impacted. Impacts to vernal pools would be mitigated at a 3:1 ratio, resulting in creation of 0.168 acre of vernal pool surface area, as described for mitigation measure **BM-4**. An RMP shall be prepared and implemented which specified long-term management for all biological open space on site and all off-site acquisition parcels. These mitigation measures would reduce the impacts to upland vegetation communities to less than significant levels.

Project implementation would result in direct significant impacts to wetland vegetation communities/jurisdictional areas. Project impacts to CDFG jurisdictional areas would consist of 0.73 acre

of tamarisk scrub and 0.24 acre of streambed. Project impacts to Corps jurisdictional areas would consist of 0.20 acre of non-wetland Waters of the U.S. No impacts to RPO wetlands would occur. Impacts to wetland vegetation communities/jurisdictional areas will be mitigated as outlined in mitigation measure **BM-5**. Mitigation would reduce impacts to these resources to less than significant levels.

The proposed project would directly impact three sensitive plant species: San Diego barrel cactus, San Diego marsh-elder and San Diego button-celery. With the BMO exception, corresponding MSCP amendment, and related mitigation (**BM-6** and **BM-7**), impacts to San Diego barrel cactus and San Diego marsh-elder would be less than significant. Impacts to San Diego button-celery associated with off-site improvements would be mitigated through implementation of **BM-8**.

Of the 31 road pools mapped on and off site, impacts to only one of those pools, which supports San Diego and Riverside fairy shrimp, would be considered significant because two of the significance guidelines would be exceeded. Impacts to this road pool would be mitigated to less than significant levels by creating 232 s.f. (2:1 ratio) of pool habitat on site that supports these species (**BM-9).**

Impacts to occupied burrowing owl habitat would be mitigated to less than significant levels with preservation of 263.1 acres of suitable habitat (**BM-10**). Impacts to the Quino would be mitigated off site through preservation of occupied habitat as part of the mitigation for impacts to vegetation communities (**BM-1** and **BM-2**). A total of seven Quino-occupied locations would be included in the preserved habitat (**BM-11**). Impacts to coastal western whiptail, California horned lark, northern harrier and raptor foraging would be mitigated through coastal sage scrub and grassland mitigation requirements (**BM-12**). Such mitigation would result in a less than significant impact.

Potential indirect impacts from project construction include fugitive dust, noise, animal behavioral changes, and errant construction impacts, as well as edge effects, including decreased water quality (through sedimentation, urban contaminants, or fuel release for example), colonization of non-native plant species, human activity, nuisance animal species, and night-time lighting. Fugitive dust produced by construction could disperse onto native vegetation. Impacts associated with airborne pollutants are human respiratory irritants rather than as threats to plant or animal species. Active construction areas and unpaved surfaces would be watered pursuant to County Grading Ordinance and permit requirements to ensure that generation of fugitive dust is held to less than significant levels.

Noise from sources such as grading, grubbing, and vehicular traffic would be an impact to local wildlife. Noise-related impacts are considered significant if sensitive species were displaced from their nests and failed to breed. Mitigation regarding grading or construction noise (**BM-13**) would result in impacts that are less than significant.

Noises generated by future industrial operations could be an impact to sensitive habitat located on adjacent lots. The placement of a Noise Protection Easement would mitigate operational noise impacts by ensuring future compliance with acceptable noise levels (**BM-14**).

Animal behavior changes could occur if breeding birds and mammals are affected by construction activities. Breeding birds and mammals may temporarily or permanently leave their nests and territories to avoid construction activity, which could reduce reproductive success and increase mortality. Mitigation would reduce impacts to less than significant by limiting clearing and grading

activities to outside of the breeding season or by conducting pre-construction surveys during breeding season to confirm absence of breeding birds (**BM-15**).

Impacts from errant grading or clearing beyond the proposed construction limits, degradation of water quality in riparian areas, colonization of non-native plants, introduction of nuisance animal species, increases in human activity, and addition of night lighting would be less than significant; therefore, no mitigation is proposed.

With implementation of the mitigation measures listed in Section 3.1.5 for significant impacts to sensitive biological resources, pursuant to the regulations and requirements of the USFWS, Corps, CDFG and County, all proposed project-specific impacts are considered significant but mitigable.

Approximately 1,181 acres of grasslands and less than 15 acres of coastal sage scrub would be impacted within the cumulative study area. Total impacts to coastal sage scrub would be small over all of Otay Mesa. This is due to limited historical presence of coastal sage scrub in this area. In addition, coastal sage scrub is predominantly located on steeper slopes at the eastern edge of the Specific Plan area and the project site and vast majority of cumulative projects are located on the mesa in predominantly non-native grassland habitat. Therefore, cumulative impacts to coastal sage scrub would be less than significant. Impacts to grasslands within the cumulative study area would be larger, but would all be mitigated to less than significant with the proposed on- and off-site mitigation. Impacts to grassland also contribute to cumulative impacts to sensitive species dependant on the grassland for foraging habitat, such as burrowing owls and other raptors. Species impacts would also be mitigated through the proposed off-site mitigation. Once the project is included into the MSCP through the minor amendment, additional preservation and cumulative impacts are addressed on a region level. Therefore, cumulative impacts to non-native grassland and associated species that inhabit non-native grassland are adequately mitigated through the preservation of on- and off-site open space and by the process of being amended into the MSCP. The County of San Diego, in coordination with the USFWS and CDFG, review and approve the MSCP Amendment. Compliance with the BMO is required in order to get an MSCP Amendment and therefore would ensure that significant resources would be adequately preserved. Because the Corps, CDFG, and County all require "no-net loss" of wetlands on each project site, cumulative impacts to wetlands would be less than significant.

The County, in coordination with the USFWS and the CDFG, is preparing a regional habitat conservation program for sensitive habitats and species. Compliance with the Otay Mesa MSCP Subarea Plan Amendment would ensure that significant resources would be adequately preserved in permanent open space and that all projects would be in conformance with that plan. The proposed project would contribute to the regional cumulative loss of sensitive non-native grassland habitat, but is also designed to fully mitigate non native grassland and Diegan coastal sage scrub impacts by permanently preserving 263.1 acres of owl occupied non-native grassland would be preserved on and off site and 2.9 acres of Diegan coastal sage scrub on site. In addition, 300-foot buffers around known owl locations are provided in the project design to further lessen direct impacts and the on-site open space easements would conserve observed locations for the Quino, barrel cactus and other species. Therefore, the project's considerable contribution to cumulative impacts on Otay Mesa would be mitigated by measures listed in Section 3.1.5 and further mitigated by agency approval of the MSCP amendment.

Table 3.1-1
EXISTING VEGETATION COMMUNITIES

VEGETATION COMMUNITY*	ACREAGE†	
	On Site	Off Site‡
Wetlands		
Tamarisk scrub (63810)	0.97	0.00
Disturbed wetland (11300)	0.03	0.00
Tier I		
Native grassland (42100)	0.00	0.1
Tier II		
Diegan coastal sage scrub (including disturbed; 32500)	8.7	0.1
Tier III		
Non-native grassland (42200)	278.5	19.0
Tier IV		
Eucalyptus woodland (11100)	1.0	0.0
Agriculture (18000)	<0.1	0.7
Disturbed habitat (11300)	22.2	5.0
Developed (12000)	<0.1	5.7
TOTAL	**311.5**	**30.6**

*Vegetation codes are from Holland (1986) or Oberbauer (1996).
†All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.
‡Off-site acreage reflects proposed off-site road, water and storm-drain improvement footprints, as well as Sewer Option A footprint. If either Sewer Option B-1 or B-2 are selected, a total of 35.0 acres would be impacted off site.
Source: HELIX 2010.

Table 3.1-2
EXISTING JURISDICTIONAL AREAS*

Jurisdictional Area	Corps		CDFG		County	
	On Site	Off Site	On Site	Off Site	On Site	Off Site
Tamarisk scrub	0.00	0.00	0.73	0.00	0.00	0.00
Disturbed wetland	0.03	0.00	0.03	0.00	0.03	0.00
Non-wetland Waters of the U.S./ Streambed	0.31	0.01	0.36	0.01	0.00	0.00
TOTAL	**0.34**	**0.01**	**1.12**	**0.01**	**0.03**	**0.00**

*Areas are presented in acre(s) rounded to the nearest 0.01.
Source: HELIX 2010.

Table 3.1-3
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
California Orcutt grass (*Orcuttia californica*)	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Vernal pool species. Would have been observed if present.
Otay Mesa mint (*Pogogyne nudiuscula*)	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Otay Mesa vernal pool species. Would have been observed if present.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CNPS List 1B.1 County Group A MSCP Covered	Low. Perennial herb occurring in coastal scrub, grassland, marsh, vernal pools, and in mesic soils along the coast. Range includes Riverside and San Diego counties and Baja. Would have been observed if present.
Willowy monardella (*Monardella linoides* ssp. *viminea*)	FE/SE CNPS 1B.1 CA Endemic MSCP NE County Group A	Low. Perennial herb typically associated with drainages in chaparral or coastal sage scrub. Would have been observed if present.
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B.1 MSCP NE County Group A	Low. Occurs on clay lenses in open areas within grasslands. Would have been observed if present.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1 MSCP NE County Group A	Low. Occurs in disturbed areas within chaparral, coastal sage scrub, and grasslands. Would have been observed if present.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B.1 County Group A	Low to moderate. Vernal pool species with limited number of populations. Would likely have been observed if present, although likelihood of detection varies from year to year.
Dehesa nolina (*Nolina interrata*)	--/SE CNPS List 1B.1 MSCP NE County Group A	Low. Occurs in mafic chaparral such as gabbroic conditions, none of which occurs on site. Would have been observed if present.
Dunn's mariposa lily (*Calochortus dunni*i)	--/SR CNPS List 1B.2 MSCP NE County Group A	Low. Typically associated with gabbro soils and chaparral habitats. The site is below elevation range of this species and lacks appropriate habitat.
Snake cholla (*Opuntia parryi* var. *serpentina*)	--/-- CNPS List 1B.1 MSCP NE County Group A	Low. Chaparral and coastal sage scrub from Point Loma south to Chula Vista and Baja. Would have been observed if present.

Table 3.1-3 (cont.)
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
Heart-leaved pitcher sage (*Lepechinia cardiophylla*)	--/-- CNPS List 1B.2 MSCP NE County Group A	Low. Occurs in thick chaparral and known in California from only 10 sites. Would have been observed if present.
Gander's pitcher sage (*Lepechinia ganderi*)	--/-- CNPS List 1B.3 MSCP NE County Group A	Low. Occurs in chaparral understory and only known from a few inland sites. Would have been observed if present.
Parry's tetracoccus (*Tetracoccus dioicus*)	--/-- CNPS List 1B.2 MSCP Covered County Group A	Low in coastal sage scrub. Would have been observed if present.
Tecate cypress (*Cupressus forbesii*)	--/-- CNPS List 1B.1 County Group A	Low. Evergreen tree occurring in southern mixed chaparral and southern interior cypress forest. Appropriate habitat absent. Would have been observed if present.
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1 County Group A	Moderate. Occurs in coastal sage scrub east of the site. Would have been observed during rare plant surveys if present on site.
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CNPS List 1B.1 County Group A	Low. Shrub occurring in chaparral and coastal sage scrub. Would have been observed if present.
Summer holly (*Comarostaphylos diversifolia* ssp. *diversifolia*)	--/-- CNPS List 1B.2 County Group A	Low. Large shrub occurring in chaparral. Habitat absent from the site. Would have been observed if present.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CNPS List 1B.1 County Group A	Low. Occurs in vernal pools and ephemeral streams and seeps in Riverside and San Bernardino counties south to Baja. Would have been observed if present.
Shaw's agave (*Agave shawii*)	--/-- CNPS List 2.1 MSCP NE County Group B	Low. Occurs in coastal sage scrub and coastal bluff scrub. Would have been detected if present.
Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*)	--/-- CNPS List 2.2 MSCP NE County Group B	Low to moderate. Evergreen shrub occurring in coastal sage scrub. Would have been observed if present.
Orcutt's bird's-beak (*Cordylanthus orcuttianus*)	--/-- CNPS List 2.1 R-E-D 3-3-1 MSCP Covered County Group B	Low. Annual species occurring in coastal sage scrub. Would have been observed if present.

Table 3.1-3 (cont.)
COUNTY SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
Orcutt's dudleya (*Dudleya attenuata* ssp. *orcuttii*)	--/-- CNPS List 2.1 County Group B	Low. Coastal bluff scrub, chaparral, and coastal sage scrub. Would have been observed if present.
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CNPS List 2.2 MSCP Covered County Group B	Low. Shrub occurring in chaparral. Would have been observed if present.
Golden-spined cereus (*Bergerocactus emoryi*)	--/-- CNPS List 2.2 County Group B	Low. Stem succulent occurring in sandy substrate in chaparral and coastal scrub. Known to occur in Otay Mesa area. Would have been observed if present.
Munz's sage (*Salvia munzii*)	--/-- CNPS List 2.2 County Group B	Moderate. South foothill and coastal region of San Diego County below 1,500 feet amsl. Known off site to north. Would have been observed if present.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1 County Group A	Low to moderate. Inconspicuous species of vernal pools. Would have been observed if present.
Short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*)	--/-- CNPS List 4.2 County Group A	Low. Parasitic herb occurring in sandy substrate in coastal bluff scrub and dunes. Known populations in Channel Islands, San Luis Obispo, and San Diego counties as well as Baja. Appropriate habitat does not occur on site.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CNPS List 4.2 County Group B	Low in chaparral and grassland with clay soil. Would have been observed if present.
Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	--/-- CNPS List 4.2 CA Endemic County Group D	Moderate. Annual species of chaparral, cismontane woodlands, coastal sage scrub, and grasslands.
Western dichondra (*Dichondra occidentalis*)	--/-- CNPS List 4.2 County Group D	Moderate. Occurs in coastal sage scrub northeast of the site.

CNPS – California Native Plant Society; CSC – California species of special concern; FE – Federally listed endangered; FT – Federally listed threatened; SE – State listed endangered; NE – MSCP Narrow Endemic Species.
*Refer to Appendix C for a listing and explanation of status and sensitivity codes.
Source: HELIX 2010.

Table 3.1-4
COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
INVERTEBRATES		
Harbinson dun skipper (*Euphyes vestris harbisoni*)	--/-- MSCP Covered	Low. Host plant San Diego sedge (*Carex spissa*) was not observed on site.
Thorne's hairstreak butterfly (*Mitoura thornei*)	--/-- MSCP Covered	Low. Closely associated with food plant Tecate cypress (*Cupressus forbesii*) and closed cone forest habitats. Appropriate habitat not present within or near the site.
Hermes copper (*Lycaena hermes*)	--/--	Low. The host plant for this species, redberry (*Rhamnus crocea*), was not observed.
VERTEBRATES		
Reptiles/Amphibians		
Arroyo southwestern toad (*Bufo californicus*)	FE/CSC MSCP Covered	Low. Found in washes, streams, and arroyos in semiarid areas. Prefer shallow pools and open, sandy stream terraces or sand bars with cottonwoods, willows, or sycamores. Appropriate habitat absent.
Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	--/CSC, Fully Protected MSCP Covered	High. Prefers washes and other sandy areas with patches of brush and rocks for cover. Habitats include low-elevation coastal sage scrub, chaparral, and valley-foothill hardwood forests.
Coast horned lizard (*Phrynosoma coronatum*)	--/CSC, Fully Protected	Moderate to high. Prefers friable, rocky, or shallow soils in coastal sage scrub and chaparral in arid and semi-arid climates.
Coastal rosy boa (*Lichanura trivirgata roseofusca*)	--/CSC	Low to moderate. Generally occurs in coastal sage scrub, particularly where rock outcrops are common. Marginally suitable habitat occurs on site.
Silvery legless lizard (Anniella nigra argentea)	--/CSC	Low. Burrows in loose soils, sandy washes, or leaf litter. Occurs in moist habitats of chaparral, pine, and oak woodlands, and riparian streamside growth. Appropriate habitat limited on site.
Red-diamond rattlesnake (Crotalus exsul)	--/CSC	Moderate. This snake is common in coastal sage scrub.
Coronado Island skink (Eumeces skiltonianus interparietalis)	--/CSC	Moderate. Prefers coastal sage scrub, grassland, and ruderal habitats.
Coast western patch-nosed snake (Salvadora hexalepis virgultea)	--/CSC	Moderate. Preferred food source (whiptails) occur in coastal sage scrub on site.

Table 3.1-4 (cont.)
COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds		
Peregrine falcon (*Falco peregrinus*)	FE/SE MSCP Covered	Low. Rare fall and winter visitor. Prefers various coastal habitats for foraging and breeding.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE MSCP Covered	Low. Prefers riparian habitats. Although this species has very high sensitivity, surveys are not recommended based on site's low habitat quality and quantity. Would have been observed if present.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/-- MSCP Covered	Low. Prefers riparian habitats. On-site habitat not extensive enough or appropriate as breeding habitat. May occur as a migrant. Would have been observed if present.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/CSC MSCP Covered	Low. Not observed during focused surveys within suitable habitat on site. Although reported to the east of the project site, would likely have been observed if present.
Cooper's hawk (*Accipiter cooperii*)	--/CSC MSCP Covered	Low. Would have been observed if present. Could occur in riparian habitats within the site and forage on site.
Tricolored blackbird (*Agelaius tricolor*)	--/CSC	Low. Occurs mostly in coastal lowland grasslands and wetlands. Would have been observed if present.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/CSC	Moderate. Occurs within sage scrub and grassland habitats.
Bell's sage sparrow (*Amphispiza belli belli*)	--/CSC	Moderate. Occurs in sunny, dry stands of coastal sage scrub and chaparral. Observed off site to the east.
San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegonensis*)	--/CSC	Low. Occurs in large stands of *Opuntia* and other cactus species. Preferred habitat not present. Would have been observed if present.
Prairie falcon (*Falco mexicanus*)	--/CSC	Moderate. Has been observed in project vicinity.
Long-billed curlew (*Numenius amaericanus*)	--/CSC	Moderate. Occasionally observed in wet areas in project vicinity.

Table 3.1-4 (cont.)
COUNTY SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	LISTING OR SENSITIVITY*	POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals		
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/CSC	Low. Coastal sage scrub, but more often in sandy washes. Known currently from one location in Orange County and one on Camp Pendleton. Site outside of species' known range.
Pallid bat (*Antrozous pallidus pacificus*)	--/CSC	Low. Roosts in caves, mines, bridges, crevices, and abandoned buildings and trees. Appropriate roosting habitat absent. Could forage throughout the site, but few potential roosting sites exist. Focused surveys not warranted.
Dulzura California pocket mouse (*Chaetodipus californicus femoralis*)	--/CSC	Low. Dense chaparral, but occasionally other shrublands. Appropriate habitat absent.
Spotted bat (*Euderma maculatum*)	--/CSC	Low likelihood to roost on site (prefers cliffs) but could forage on site. Occasionally enters buildings or caves and occurs in arid country.
Yuma myotis (*Myotis yumanensis*)	--/--	Low. Arid areas. Roosts in buildings, mines, caves, and crevices, which are absent.
San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/CSC	Low. Prefers open, sandy land with weeds, which does occur on site. Trapping necessary for detection but not warranted due to the species' low sensitivity.
Greater western mastiff bat (*Eumops perotis californicus*)	--/CSC	Low. Appropriate habitat absent. In chaparral and oak woodland with coast live oaks and in arid, rocky areas. Roosts on or in buildings, crevices in cliffs, and in trees and tunnels.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/CSC	High. Likely occurs on site.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/CSC	Moderate. Nests are usually observed if present but may have escaped view in thicker, vegetated areas. Trapping necessary for detection but not warranted due to the species' low sensitivity.
Southern grasshopper mouse (*Onychomys torridus ramona*)	--/CSC	Moderate. Species not restrictive in its habitat requirements. Trapping necessary for detection but not warranted due to low sensitivity.
Townsend's big-eared bat (*Plecotus townsendii pallescens*)	--/CSC	Low. Roosts in caves, mine tunnels, and buildings. Appropriate habitat absent.

CNPS – California Native Plant Society; CSC – California species of special concern; FE – Federally listed endangered; FT – Federally listed threatened; SE – State listed endangered.
*Refer to Appendix C of BTR for a listing and explanation of status and sensitivity codes.
Source: HELIX 2010.

Table 3.1-5
IMPACTS TO VEGETATION COMMUNITIES*

Vegetation Community	Existing On Site	On-site Impacts	Off-site Impacts†	Total Impacts
Wetlands				
Tamarisk scrub	0.97	0.97	0.00	**0.97**
Disturbed wetland	0.03	0.00	0.00	**0.00**
Tier I				
Native grassland	0.00	0.0	0.1	**0.1**
Tier II				
Diegan coastal sage scrub (including disturbed)	8.7	1.8	0.1	**1.9**
Tier III				
Non-native grassland	278.5	244.1	19.0	**263.1**
Tier IV				
Eucalyptus woodland	1.0	1.0	0.00	**1.0**
Agriculture	<0.1	<0.1	0.7	**0.7**
Disturbed habitat	22.2	15.6	5.0	**20.6**
Developed	<0.1	<0.1	5.7	**5.7**
TOTAL	**311.5**	**263.5**	**30.6**	**294.1**

* All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

† Off-site impact acreage reflects proposed off-site road, water and storm-drain improvement footprints, as well as Sewer Option A footprint. Off-site grading impacts would increase to 35.0 acres if Sewer Option B-1 or B-2 is selected.

Source: HELIX 2011.

Table 3.1-6
IMPACTS TO JURISDICTIONAL AREAS*

JURISDICTIONAL AREA	CORPS			CDFG			COUNTY		
	Existing On Site	Impacts		Existing On Site	Impacts		Existing On Site	Impacts	
		On Site	Off Site		On Site	Off Site		On Site	Off Site
Tamarisk scrub	0.00	0.00	0.00	0.73	0.73	0.00	0.00	0.00	0.00
Disturbed wetland	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00
Non-wetland Waters of the U.S./Streambed	0.31	0.19	0.01	0.36	0.23	0.01	0.00	0.00	0.00
TOTAL	**0.34**	**0.19**	**0.01**	**1.12**	**0.96**	**0.01**	**0.03**	**0.00**	**0.00**

*Areas are presented in acre(s) rounded to the nearest 0.01.

Source: HELIX 2010.

Table 3.1-7
CUMULATIVE PROJECT IMPACT SUMMARY*

Map Reference	Project Name	Project Number	Non-Native Grassland (acres)	
			Impacts	Mitigation (non-native grassland or better)
County Projects				
20	Otay Crossings Commerce Park (Proposed Project)	TM 5405, SPA 04-006 MUP 00-024	263.1	263.1
1	Otay Tech Center	TM 5139 MUP 98-020 STP 02-05139-1 SPA07-003/TM5538	171	54
2	Airway Business Center/Fedex	TM 5304R/S08-018	38.5	19.3
4	Otay Hills Construction Aggregate Extraction Operation	MUP 04-004 RP 04-001	NA	NA
5	Otay Mesa Travel Plaza	TPM 20414 MUP 98-024 MUP Modification 98-024-01 L14632 AD 04-025	73.5	73.5
6	Burke Minor Subdivision/Otay Logistics Center	TPM 20701RPL1 ZAP 99-029 STP 05-018 SPA 05-005	40.0	20.0
8	East Otay Mesa Auto Storage/ Aaron Construction Auto Auction Park	MUP 00-012 Minor Deviation 00-012-02	33.4	16.7
9	Otay Mesa Auto Transfer/Rowland	MUP 03-001	8.0	4.0
11	National Enterprises Storage and Recycling Facility	MUP 98-001	103.6	92.3
12	Otay Mesa Generating Project (Calpine)	TPM 20570	63.5	35.9
13	Otay Business Park (Paragon)	TM 5505	176.1	176.1
14	Paseo De La Fuente	CG 4530	12.0	6.0
15	Border Patrol Site Grading Plan (East Otay Mesa Parcel B Grading Plan)	L 14456	17.7	NA

Table 3.1-7 (cont.)
CUMULATIVE PROJECT IMPACT SUMMARY

Map Reference	Project Name	Project Number	Non-Native Grassland (acres)	
			Impacts	Mitigation (non-native grassland or better)
County Projects (cont.)				
16	Power Plant Laydown Site	L 14208	13.5	6.8
17	Vulcan Site Batch Plant	L 14625	10.9	8.5
18	Corrections Corporation of America	P06-074 (MUP 06-074) SPA 05-005	37.0	37.0
19	Maple Leaf Industrial/Piper Otay Park	TM 5527	24.0	12.0
21	California Crossings	TPM 21046 MUP06-102 93-19-006AA	23.4	15.4
23	RTX (Rapid Transfer Express)	S08-022	14.63	15.0
Caltrans/GSA Projects				
30	SR-11 and Otay Mesa East Port of Entry (POE) (Phase I)	PM 0.0/2.7 EA 056300	159.1**	NA
City of San Diego Projects				
49	Las Californias Center	4281	1.4	1.4

* Refer to Table 1-5 and Figure 1-12 for additional information and location of these cumulative projects.

** Acreage represents all non-native grassland in the Western (preferred) Alternative in the Program EIR/EIS. Approximately half of this acreage occurs within the Project footprint and is accounted for in this report.

Table 3.1-8
MITIGATION FOR IMPACTS TO SENSITIVE VEGETATION COMMUNITIES*

Vegetation Community	Total Impacts†	Mitigation						
		Required		Proposed				
		Ratio	Area	Preservation		Creation	Restoration	Total
				On Site	Off Site			
Wetlands								
Tamarisk scrub	0.73‡	1:1	0.73	0.00	0.00	0.73	0.00	**0.73**
Disturbed wetland	0.00	--	0.00	0.03§	0.00	0.00	0.00	**0.03**
Tier I								
Native grassland	0.1	2:1	0.2	0.0	0.2	0.0	0.0	**0.2**
Tier II								
Diegan coastal sage scrub (including disturbed)	1.9	1.5:1	2.9	2.9**	0.00	0.00	0.00	**2.9§**
Tier III								
Non-native grassland	263.1	1:1[+]	263.1	44.7††	218.4	0.0	0.0	**263.1**
TOTAL	**265.7**	--	**266.9**	**47.6**	**218.6**	**0.73**	**0.00**	**266.9**

* All wetland areas are presented in acre(s) rounded to the nearest 0.01; upland areas are rounded to the nearest 0.1.

† Off-site impact acreage reflects proposed off-site road, water and storm-drain improvement footprints, as well as Sewer Option A footprint. Off-site grading impacts would increase to 35.0 acres if Sewer Option B-1 or B-2 is selected.

‡ A total of 0.97 acre of tamarisk scrub would be impacted, of which only 0.73 is considered jurisdictional and would require mitigation.

§ Not included in the mitigation total.

** Excess of 3.9 acres of Diegan coastal sage scrub will be used to meet non-native grassland mitigation by 3.9 acres. May also be mitigated with higher tier habitats or fee-based program.

†† Includes 34.4 acres of non-native grassland, 6.4 acres of disturbed habitat to be restored to grassland, and 3.9 acres of excess Diegan coastal sage scrub.

[+] A 1:1 ratio is required for burrowing owl occupied habitat.

Source: HELIX 2011.

Table 3.1-9
MITIGATION FOR IMPACTS TO JURISDICTIONAL AREAS*

Jurisdictional Area	Ratio	Corps		CDFG		County	
		Impacts	Mitigation	Impacts	Mitigation	Impacts	Mitigation
Tamarisk scrub	1:1	0.00	0.00	0.73	0.73	0.00	0.00
Disturbed wetland	--	0.00	0.00	0.00	0.00	0.00	0.00
Non-wetland Waters of the U.S./Streambed	1:1	0.20	0.20	0.24	0.24	0.00	0.00
TOTAL	--	**0.20**	**0.20**	**0.97**	**0.97**	**0.00**	**0.00**

*Areas are presented in acre(s) rounded to the nearest 0.01.

Source: HELIX 2010.

Table 3.1-10
SENSITIVE SPECIES MITIGATION

Species	Impacts	Mitigation Ratio	Mitigation Location	Mitigation Type	Resource Management Plan/Mitigation Plan
San Diego barrel cactus	72 individuals	2:1	On site, Lonestar Ridge, O'Neal Canyon	Preservation of 121 individuals on site, 279 individuals on Lonestar Ridge, 3 individuals on O'Neal Canyon, Transplantation of 72 individuals	On site and Lonestar Ridge RMP
San Diego marsh elder	138 individuals	2:1	On site	Preservation or planting of 276 individuals	Off-site acquisition at Marron Valley or inclusion in Corps/CDFG mitigation
San Diego fairy shrimp	116 sq. ft.	2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan
Riverside fairy shrimp		2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan
Burrowing owl		1:1	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres), Ramona (40 acres)	Preservation	On site, Lonestar Ridge and Ramona RMP, Burrowing owl/QCB mitigation plan
Quino checkerspot butterfly	2 individuals	3.5:1	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres)	Preservation of 7 locations, habitat restoration	On site and Lonestar Ridge RMP, Burrowing owl/QCB mitigation plan

Table 3.1-10 (cont.)
SENSITIVE SPECIES MITIGATION

Species	Impacts	Mitigation Ratio	Mitigation Location	Mitigation Type	Resource Management Plan/Mitigation Plan
Coastal western whiptail, California horned lark, grasshopper sparrow, loggerhead shrike, golden eagle, white-tailed kite, northern harrier[1]	N/A	Mitigation met through habitat preservation	On site (47.4 acres), O'Neal Canyon (84 acres), Lonestar Ridge (82 acres), Ramona (40 acres)	Preservation	On site, Lonestar Ridge and Ramona RMP
Spadefoot toad	116 sq. ft.	2:1	Lonestar Ridge	Vernal pool restoration – 232 sq. ft.	Lonestar Ridge Vernal Pool Restoration Plan

[1]No take under the State definition of take would occur to State Fully Protected Species.
Source: HELIX 2011.